The design of the Graduate Management Admission Council's (GMAC) New Matriculants Survey, which gathered data on 2,053 first-year students at 91 U.S. graduate schools of business and management in 1985, is described. The basic purposes and parameters of the GMAC Survey (requests for proposals) are explained, and the GMAC survey design is detailed. This survey provides a representative national sample of graduate management students who are newly matriculated. This sample may be used for comparison of Masters of Business Administration (MBA) students to other interesting student groups. It may also be used for analysis of the career decisions of MBA students and potential MBA students. The survey asks for information on personal and family background, occupational history, educational background, financial status, personality characteristics, attitudes, decisions on graduate education, and expectations on type and quality of employment. Six appendices are as follows: table of relative efficiencies from different disproportionate allocations among school strata; summary of representative indicators from surveys related to the GMAC MBA Matriculant Survey; in-scope and out-of-scope programs for the GMAC Survey; issues explored in preliminary survey of schools; schools contacted in preliminary survey; and annotated bibliography. The MBA New Matriculants Survey questionnaire is included. Response rates and sample sizes by stratum and primary sampling unit are noted. (SM)
First Results from the GMAC's New Matriculants Survey

Design for a Survey of New Matriculants in Graduate Schools of Business and Management
First Results from the GMAC's New Matriculants Survey:

DESIGN FOR A SURVEY OF NEW MATRICULANTS IN GRADUATE SCHOOLS OF BUSINESS AND MANAGEMENT

Edited by Ross M. Stolzenberg

April, 1988

Views expressed in this report are those of the authors and do not necessarily reflect those of the Graduate Management Admission Council.
PREFACE

This document describes the design of the Graduate Management Admission Council’s New Matriculants Survey, which gathered data on 2,053 first-year students at ninety-one U.S. graduate schools of business and management between April and December of 1985. The survey is based on a two-stage sample that was constructed to be representative of both schools and students: first, schools were randomly sampled, and then random samples of students were drawn from each sampled school. The survey achieved response rates of 93 percent from schools and 73 percent from students. The vast majority of respondents completed a lengthy written questionnaire that had been mailed to them; a few responded to an abbreviated questionnaire that was administered by telephone. To the best of our knowledge, this is the only survey that provides a wide range of data on the attitudes and characteristics of a nationally representative sample of MBA students. Statistical reports based on the New Matriculants Survey data are available from the Graduate Management Admission Council.
ACKNOWLEDGEMENTS AND AUTHORSHIP OF THIS DOCUMENT

A number of persons and organizations were involved in the design and execution of the GMAC New Matriculants Survey. William Broesamle, president of GMAC, conceived the project and supported it vigorously. The Board of Trustees and the Research Committee of the Graduate Management Admission Council (GMAC) supervised the project from start to finish. Ross M. Stolzenberg of GMAC formulated basic design specifications for the project and authored the request for proposals which articulated those specifications. Along with the National Opinion Research Center (NORC), a survey research organization affiliated with the University of Chicago, Stolzenberg and John Abowd of the University of Chicago Business School established specific survey and sample-design parameters and held basic responsibility for all aspects of the survey. Sampling and some broader issues were dealt with by Martin Frankel of City University of New York and NORC. A committee led by Abowd and assisted by Martha Mandilovitch of NORC constructed the questionnaire and conducted the Chicago-area survey pretest and pretest analysis. Committee members included R. Darrell Bock, Edward P. Lazear, Christopher Winship, Calvin Jones, Edward P. Lazear, and Karen Tourangeau. The cooperation of sampled schools was obtained through the joint efforts of GMAC and NORC, and the survey was fielded and processed by NORC staff under the supervision of Martha Mandilovitch and Woody Carter. Chris Beard of NORC supervised the data processing. Roseann Giarrusso of GMAC did much preliminary analysis to assure the quality of the New Matriculants Survey data. Leslie Duncan of GMAC assisted with production of this manuscript. We are very grateful to many people for their efforts on this project, especially to those at each sampled school who took pains to see that student lists were properly compiled so that survey mailings and follow-up telephone calls could be conducted properly. Without their help and the cooperation of respondents, the efforts of all others connected with this project would have been for naught.

This document is composed of excerpts from NORC’s final report of efforts to design the New Matriculants Survey, of relevant documentation from the GMAC’s request for proposals to do that design work, and some supplementary information. As indicated elsewhere in this document, the NORC design report was authored by John
Abowd, Martin Frankel, Martha Mandilovitch, Caivin Jones, Edward P. Lazear, Karen Tourangeau, and Christopher Winship. Editing of that report for inclusion in this document was intended to:

- exclude irrelevant materials, such as proposals for additional surveys or budget estimates,
- explain otherwise unexplained abbreviations or symbols, or to replace them with self-explanatory language,
- delete information which might compromise the anonymity of participants in the survey, and
- delete information which became inaccurate due to survey design changes and administrative contingencies which occurred subsequent to writing of the design report.

Except for re-typing, changes noted above, and deletion of some appendices deemed unlikely to be of use to readers, the design document is reprinted here as received from NORC.
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I. BASIC PURPOSES AND PARAMETERS OF THE GMAC SURVEY OF NEW MATRICULANTS IN GRADUATE SCHOOLS OF BUSINESS AND MANAGEMENT:

Request for Proposals

A. Introduction

The Graduate Management Admission Council ("GMAC" or the "Council") is a not-for-profit organization of graduate business and management schools. The Council provides information to schools, other organizations and prospective students for their use in planning and in making reasoned decisions concerning management education. As a primary objective, the Council seeks to increase knowledge about management education by conducting research and encouraging other qualified organizations and individuals to perform management education research.

Naturally, much management education research requires data on students. And while there are numerous high quality datasets for performing research on undergraduates and graduate students in other disciplines, data on graduate management students are exceedingly limited, and consequently research on graduate management education is hindered. To remedy this data shortage, the GMAC plans to commission an annual survey of newly-matriculated graduate management students. This survey would be used for GMAC research purposes, and would be archived and made available for research on graduate management education by other qualified organizations and individuals. Design of this survey would be performed by a contractor, and would take place in the first half of 1985. Upon completion of the design contract, the GMAC will attempt to negotiate with the design contractor a contract to field the survey for the first time in the Fall of 1985. Subsequent contracts or contract amendments would provide for analysis of the survey data, if mutually agreeable to the contractor and the GMAC. This RFP seeks proposals to design this survey.

B. Background

In late 1983, the Council began to consider the suggestion that it undertake an annual survey of newly-enrolled students in graduate schools of management. The GMAC concluded that several useful purposes would be served by this new student survey.
It would provide the Council and schools of management with a profile of students matriculating in graduate management education programs. Profiled characteristics would include attitudes, career goals, factors involved in selecting among schools, finances, race and ethnicity data, and even reactions to aspects of the admissions process. This survey might produce separate statistics for various types of schools, and even for individual schools which might wish profiles of their own students.

It would provide a means of tracking changes in the characteristics of students entering graduate management programs. Change data would be a natural product of repeated administration of the survey in successive years. When combined with statistics on characteristics of undergraduates, such statistics could be used to determine the extent to which future changes in the management school applicant pool are due to changes in the undergraduate population as a whole or changes in the segment of the undergraduate population which seeks postgraduate management education.

It would facilitate the Council's own efforts to develop a coherent program of contracted and in-house research consistent with the statement of research policy and research interests adopted in mid-1984.

Social science research tends to follow social science data, and so assembly of a longitudinal data base on management student characteristics would encourage research on graduate management education and its effects by scholars who study careers and education, as well as facilitating the Council's own studies. At present, there are no high-quality data bases which support individual-level research focused on graduate management students.

In short, it appears that annual surveys of newly-enrolled graduate students in management would serve a wide variety of uses for the GMAC and the constituencies it serves.

Social science experience with student surveys suggests that an annual survey of graduate management students is both valuable and feasible. For three recent examples of successful survey efforts directed at undergraduate populations, there are Astin's annual surveys of recently-enrolled college undergraduates, the National Longitudinal Surveys of high school students, and the youth cohorts of the National Longitudinal Surveys of labor market experience. These examples and similar successful efforts suggest that data from such surveys is of topical interest, that it provides a continuing
resource for further research beyond the original purposes of the survey, and that it proves very useful in addressing both policy questions and basic research issues confronted by a wide variety of actors including educational administrators, economists, psychologists and sociologists.

Past experiences with surveys of student populations also suggest that techniques are available (or can be developed) to keep the costs of annual student surveys within acceptable limits. For example, recent advances in low-cost mail and telephone interviewing methods have had encouraging results. And, because schools bring students together in groups, there is some possibility that questionnaires can be administered, or at least delivered, to students in group settings. Specific decisions about questionnaire administration are premature now, but it does seem very reasonable indeed to believe that an annual survey of graduate students in management can be carried out cost-effectively.

In short, annual surveys of newly-enrolled graduate students in management seem procedurally and financially feasible, as well as useful in fulfilling the mission of the Graduate Management Admission Council. Accordingly, in September, 1984 the GMAC Board of Trustees authorized issuance of a request for proposals to design an annual survey of newly-enrolled graduate students in management. Trustees formally stated an intention to implement a design for these surveys. Funds will be allocated for the design and execution of these surveys, under conditions that the proposals and ultimate design specifies a survey which (a) meets GMAC objectives, in the judgement of the Board, (b) satisfies current professional standards for such surveys, and (c) does not exceed the Board's judgement of reasonable costs for the benefit to be received by the Council for the survey.

C. GMAC Organizational Structure for Annual Survey Design Project

The administrative structure outlined below is designed to assure the following results:

1. The survey design and its execution should be of obvious high technical quality.

2. The surveys should aid the Council generally in fulfilling its mission of service to graduate management education, and more specifically in reaching the goals stated in this proposal.
3. The surveys should be cost-effective.

4. The surveys should become operational as soon as practically possible.

The management structure for the proposed surveys will consist of the following elements:

1. GMAC Board of Trustees, which will set policy, allocate funds and approve contracts;

2. GMAC Executive Office, which will provide administrative control and operational contact with contractor(s), and which will interpret policy for contractor(s), in coordination with GMAC Research Committee, which monitors all GMAC research activities and recommends action to Trustees;

3. Special Annual Survey Advisory Panel, which will be composed of GMAC personnel and persons who will represent the views of constituencies served by the Council;

4. Contractor(s), which will be responsible for the design and execution of the surveys.

The advisory panel will consist of one or more persons with substantive expertise relevant to the surveys, one or more persons who represent the interests of the Council, one or more persons who directly represent the interests of graduate schools of business, and one or more representatives of the business community, as well as the vice president and president of the GMAC.

D. Major Project Stages and Schedule

The project will follow major steps outlined below and in the project schedule. This document requests proposals for steps up to but not including the data gathering stage.

1. Submission and approval of the contractor’s management plan.

2. Selection among design alternatives identified by contractor.
3. Negotiation of contract for data gathering phase (or, if negotiations are unsuccessful, selection of a new contractor for survey execution).

4. Data gathering.

5. Preliminary analysis of data.

6. Consideration of proposals for additional data analysis.

In theory, use of the same contractor to design the survey, gather data and perform preliminary analyses will enhance coordination and lead to economies of scale. Therefore, the Council intends to negotiate a contract for survey execution with the organization which is awarded the survey design contract. However, the Council reserves the right to use another contractor for data gathering and subsequent survey-related activities if these negotiations prove unsatisfactory to the GMAC.

The project is scheduled to permit the first full-scale survey administration to take place in the Fall of 1986. Some major project milestones are as follows:

- October 1, 1984: Distribution of request for proposals
- November 15, 1984: Deadline for submission of proposals
- January, 1985: Signing of contract for production of deliverables described in this request for proposals
- February, 1985: Submission of management plan by contractor
- July 30, 1985: Transmittal of final deliverables to GMAC, to permit survey execution in Fall, 1986

E. Deliverables

To facilitate efficient decision-making, and to permit early rejection of undesirable alternatives, project products are to be delivered sequentially over the course of the planning contract period. All deliverables will be transmitted to GMAC in draft form, sufficiently in advance of their due date to permit GMAC to comment upon them and for the contractor to consider those comments in making final revisions.
1. Ultimate and Final Deliverables

Ultimate and final deliverables to be delivered upon completion of the survey planning contract are:

1. A tested questionnaire, typewritten or printed, suitable for delivery to a printer or type-setter.

2. A fully-developed sampling design, including respondent selection protocols. The design is to be explicated in a written memorandum or report sufficiently detailed to permit immediate commencement of sampling.

3. A written report or memorandum stating the rationale for the content and design of the survey, including reasons for rejecting alternative designs and statements of research questions which analysis of survey data will address.

Additional delivery of written materials in computer-readable form is desirable but not necessary.

2. Products to be Delivered While Work is in Progress

Planning will require GMAC participation in choices among design alternatives elucidated by the contractor. Accordingly, the following deliverables are to be produced while work is in progress:

1. Within one month after the commencement of work, the contractor will submit for GMAC approval a final management plan stating a schedule for project tasks and delineating the specific individuals who will be responsible for performing them.

2. At a time to be agreed upon by the GMAC and the contractor, the contractor will submit a discussion document to the GMAC, for its use in advising the contractor on its preferences regarding design alternatives. The date of this submission will not be later than April 15, 1984, unless the Council agrees specifically to a later time. This document will be a written memorandum proposing at least three alternative design strategies, and proposing subject areas to be considered in the surveys.

The proposal of design strategies will include the following elements:
a. A statement of each basic strategy, its goals, strengths and weaknesses. Where appropriate, this statement will include information gathered by the contractor to support assertions about costs, response rates and similar matters. Telephone, mail and group-administered questionnaires should be considered. Sole reliance on personal interviews is very likely to be too costly to be practical, although the GMAC will accept evidence to the contrary.

b. A sampling strategy (not a detailed sampling plan) appropriate for each research strategy and an outline of a sampling plan corresponding to each sampling strategy.

c. An analysis of costs likely to be incurred by each strategy.

d. A tentative schedule for implementation of each strategy.

The proposal of subject areas to be considered in the surveys shall also include a discussion of the rationale for including these subjects. These subject areas would include at least the following topics:

a. Demographic characteristics

b. Educational and family background

c. Personal finances

d. Past work experience

e. Career plans and expectations

f. Reasons for attending graduate school in management
   - in general
   - reasons for attending the school in which respondent is currently enrolled

g. Values and attitudes on social, economic, political and other topics
The contractor is strongly encouraged to exercise creativity and ingenuity in all matters regarding the survey, including the topic areas to be covered by the questionnaire.

3. Sufficient communication with the GMAC to keep it informed of progress on the project, and to permit it to make decisions regarding the project in a timely manner.

F. Product Ownership Publication Rights

In keeping with its goal of broadening knowledge of graduate management education, the GMAC encourages publication in scholarly journals of the research it sponsors. The contractor will have the right to publish some or all of the deliverables produced under this contract in scholarly publications, professional journals and its own publication series. The following statement will be included in all such publications:

"This research was sponsored by the Graduate Management Admission Council (GMAC). The opinions expressed here are those of the authors, and not necessarily those of the GMAC, which encourages researchers to freely express and publish their own opinions."

The contractor will supply the GMAC with draft copies of all such articles, books or reports a reasonable time before they are submitted for publication, so that the GMAC can communicate comments on the drafts to the contractor. After publication, the contractor will supply to the GMAC, at no additional cost, a copy of each such publication.

Publication rights notwithstanding, deliverables described in this document shall be the property of the GMAC, for use and dissemination as it sees fit. If the GMAC reprints any of these deliverables, the GMAC will accurately report their authorship by contractor personnel, unless the contractor expresses in writing, in a timely manner, a desire to the contrary.

G. Data Confidentiality

Confidential data on individuals, organizations and institutions may be obtained by the contractor in the course of this project. Such data will be considered the property of the GMAC. The GMAC will, and the contractor will be required to, protect
such data in accordance with the highest professional standards and statutory requirements for protection of confidential survey data. The contractor will consult with the GMAC in establishing adequate procedures for protecting such confidentiality. Results of statistical analyses based on such data may, of course, be reported to the public, so long as those reports do not permit identification of specific individuals or institutions.

H. Suggested Format for Proposals

Proposals need not and should not include expensive or elaborate art work, bindings, or displays. The form of a proposal may vary and should be chosen to enhance its clarity. However, nearly every proposal will contain the following sections:

1. Table of Contents.

2. Abstract or Summary, which very briefly states the research problem to be addressed and the main points of the detailed technical section.

3. Technical Section, which should consist of the following parts:

   a. Introduction, which gives an overview of the most important parts of the technical section.

   b. Statement of the Problem and its Significance, which explains: the questions which the research will address; previous efforts, if any, to address these questions; and the need, benefit and significance of the research.

   c. Technical Section, which discusses in detail the proposed approach to the research problem, methodology to be applied, potential areas of uncertainty or anticipated difficulty, plans for overcoming anticipated difficulties, and plans for acquisition of necessary data.

   d. Statement of Responsibility for Technical Quality, which is a signed and dated statement by the proposed principal investigator(s) indicating that they accept
professional responsibility for technical quality of the proposed research.

e. List of References, which indicate the proposed principal investigator(s)'s familiarity with published research related to the proposed study.

4. Management Section, which should include:

a. Schedule, outlining each phase of the project and when it will be performed.

b. Staffing Plan, indicating the person-days of principal investigator(s) and others to be spent on each phase of the project.

c. Budget, distinguishing direct from indirect costs, non-personnel from personnel costs, and costs to be allocated to principal investigator(s) and others.

d. Resumes or Curriculum Vitae of principal investigator(s) and other persons with technical responsibility. This section should describe other commitments of the proposed principal investigator(s) during the proposed project period, to assure that key personnel will indeed have time to devote to the project.

5. Appendices, which contain any other significant information.

I. Criteria for Evaluation of Proposals

1. Understanding of GMAC's objectives. The successful proposal will demonstrate understanding of GMAC's mission as well as the objectives it hopes to reach with the annual surveys of newly-matriculated graduate management students.

2. Personnel. The successful bidder will offer personnel with records of achievement in all phases of survey research, including study design, survey planning, sampling, data gathering, data analysis, and publication of survey
results. Personnel will represent a variety of social science disciplinary perspectives, and will be familiar with contemporary graduate management education.

3. *Reasonableness of the work plan.* The successful proposal will include a work plan which states ambitious but attainable goals which can be achieved on schedule.

4. *Cost.*

5. *Organizational experience.* The successful bidder will have substantial successful organizational experience in the design and management of survey research.

6. *Awareness of existing research related to the subject of this project.* The contractor’s proposal will review significant related research and theory.

7. *Nondiscrimination and protection of human subjects.* The successful bidder must be in compliance with all relevant Federal and state laws and regulations regarding employment discrimination and protection of human subjects.
II. GMAC SURVEY DESIGN

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Design Team

A. Introduction

The MBA Matriculant Survey is designed to provide a representative national sample of graduate management students who are newly matriculated. This sample may be used for comparison of MBA students to other interesting student groups, and, if surveys were repeated at intervals, for comparison of MBA students entering in a particular year with MBA students entering in other years, comparison of entering MBA students with themselves at earlier and later stages of life (the latter requires a follow-up at least at the school level).

The Matriculant Survey may also be used for analysis of the career decisions of MBA students and potential MBA students. This analysis would use the information from the Matriculant Survey in combination with information from other nationally representative surveys that focus on broader populations. Social and economic processes leading to management career choices could also be investigated using this survey.

The discussion in this section is divided into six related parts. Section B describes the technical sampling plan for this survey. In section C we discuss the costs and benefits of disproportionate sampling plans. Section D provides a description of our background research and development with respect to instrument design. In section E we define an in-scope graduate management degree program and discuss how we located schools in the population. Section F describes the procedure for administration of the survey. Section G discusses the planned pre-test.
B. Sample Design

The proposed design for the Matriculant Survey uses a two-stage sampling plan. Schools form the primary sampling units. A school is in the population if it offers an in-scope graduate management degree in any part of its degree programs. The term in-scope program, as it is used throughout this manuscript, refers to a post-graduate degree program leading to the MBA or MBA-equivalent degrees listed in Appendix C. In-scope programs are eligible to be included in the sample with some probability, whereas, out-of-scope programs have a zero probability of entering the sample by design. In-scope degree programs will be sampled from strata defined below.

Within each sampled program, students will be selected from a list of in-scope matriculants. A matriculant is in-scope if he or she has matriculated into an in-scope degree program within the last six months. In-scope matriculants are eligible to be included in the sample with some probability, whereas, out-of-scope matriculants have a zero probability of entering the sample by design. During our initial contact of the sampled schools, we will determine which schools expect large groups of matriculants in the summer/fall and which expect large groups throughout the year. The student sampling will be adjusted to reflect differences in the summer/fall and winter/spring matriculant populations. The final sample will consist of students who matriculated into an in-scope degree program between June 1985 and May 1986.

The sample of first year matriculants will be selected using a two stage, disproportionately stratified, clustered sample procedure.

Stage I

Schools with in-scope programs have been divided into three basic strata as follows:

Stratum 1: The 10 schools receiving the largest number of GMAT score reports in 1983/84.

Stratum 2: Schools which are accredited by the American Assembly of Collegiate School of Business (AACSB) that are not in stratum 1. (Number of schools = 224)

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1 The Yale School of Management was included in Group 2 even though it is not yet AACSB accredited.
Stratum 3: Schools offering in-scope programs which are not accredited by the AACSB
(Number of schools = 347)

In total, 100 schools will be selected from the population of 581 schools. The allocation of schools among the three strata is shown in the table below.

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Number of Schools</th>
<th>Percent of Schools</th>
<th>Percent of Matriculants</th>
<th>Sample Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>1.7%</td>
<td>6.7</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>244</td>
<td>42.0%</td>
<td>44.7</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>347</td>
<td>59.7%</td>
<td>48.6</td>
<td>25</td>
</tr>
</tbody>
</table>

This allocation represents a compromise between the optimal allocation for estimating means and proportions in the entire matriculant population defined by the sum of the three strata and the need to produce separate, reliable estimates for strata 1 and 2 taken together and stratum 1 and 2 taken separately.

In order to equalize the burden on participating schools and in order to maximize statistical efficiency, approximately equal numbers of students (35) will be contacted in each selected school and the overall probability of selection of students within each stratum will be equal. This will be achieved by a first stage selection of schools within stratum with probabilities proportional to first year enrollment.

Direct estimates of first year enrollment are available from published sources for 367 of the 581 schools. In all but 11 remaining schools estimates of the number of degrees granted are available. For this latter group, first year enrollment will be estimated by a linear regression based on the predicted relationship of degrees awarded to first year enrollment. Regression parameters will be estimated from the 346 schools for which both first year enrollment and number of degrees granted is available. The 11
schools which lack both first year enrollment and degrees granted estimates will be contacted in order to secure enrollment estimates.

Within stratum 1, all schools will be included in the selected sample.

Within strata 2 and 3, sample selection of schools will be accomplished as follows:

Within each stratum schools will be sort ordered by geographic census region and state. First year enrollments will be successively accumulated (with running sub-totals) from the beginning of the stratum list and continuing until the end. Let MOS(i) denote the estimated first year enrollment (measure of size) for school i within a specific stratum. A skip interval will be formed by dividing the total first year enrollment within the stratum by the number of schools to be selected. A random start will be obtained from a random number table from 0 to this skip interval. The skip interval will be successively added to the random start in order to obtain "selection numbers." These selection numbers will be used in conjunction with the successive cumulative subtotals in order to identify selected schools.

This process will produce a sample of schools for which the probability of selection for the ith sample school is equal to

\[
\text{PROB}(i) = \frac{a \times \text{MOS}(i)}{\text{SUM(MOS(i))}}
\]

Where a equals the allocated number of schools in the stratum and \( \text{SUM(MOS(i))} \) is the sum of the MOS values for all schools in the stratum.

Stage II

Within each of the 100 schools a list of first year matriculated students will be requested and this list will be sampled with sampling rate (probability for each student) equal to \( b/\text{MOS}(i) \), where \( b \) is a constant to be determined based on anticipated response/cooperation rate. This will be accomplished via systematic random sampling from a list which has (if possible) been ordered by last name within sex.

For schools within strata 2 and 3 this second stage sampling rate will produce an overall probability of selection equal to
PROB(1) = \( \frac{a \times \text{MOS}(i)}{\text{SUM(MOS}(i))} \) \( \times \) \( \frac{b}{\text{MOS}(i)} \) = \( \frac{a \times b}{\text{SUM(MOS}(i))} \)

For students in stratum 1, the probabilities of selection will not be equal over two stages (across schools) and it will be necessary to apply compensating data weights on a school by school basis.

C. Discussion of Design Efficiency with Disproportionate Allocations

The issue of design efficiency arises because many interesting research questions revolve around accredited MBA programs, but these programs only account for 51 percent of all first year enrollment. In addition, some research questions focus on the differences between the ten large programs in group 1 and the other accredited programs in group 2. For these reasons, we believe that all schools in group 1 should be sampled. In addition, schools in group 2 should be sampled in greater proportion than schools in group 3 (non-accredited programs).

In order to investigate the effects of this disproportionate sampling on the efficiency of estimates generated from the complete sample (groups 1-3) and estimates generated from the accredited subsample (groups 1 and 2), we prepared a table of relative efficiencies. This table appears in Appendix A. The table shows the impact of differential (nonproportional) sampling rates on sample derived estimates for all three groups (or strata) and groups 1 and 2 only.

The table values are relative efficiency levels (i.e. the inverse of design effects, expressed as a percentage of the efficiency attained by a simple random sample). For example, an efficiency level of 90 percent implies that the standard errors of estimated weighted means and proportions defined over the entire population will be the same as those that would have resulted from a simple random sample which was only 90 percent as large. This standard error statement is based on the assumption of equal variance among the strata and in the entire population as a whole. It should be noted that efficiency computations for strata 1 and 2 relate to the sample size for these strata only.

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2 This estimate is based on the data from the Official Guide which we compiled into our master list of in scope schools.
The relative efficiency computations in Appendix A do not consider the loss in efficiency that will result from the clustering of sample observations within schools from strata 2 and 3. Since schools in stratum 1 will be selected with certainty, we essentially have 10 sub-strata with an element level (non-clustered) sample within each of the sub-strata.

On the basis of our analysis we recommend that 100 schools be sampled: 10 schools from stratum 1, 65 schools from stratum 2, and 25 schools from stratum 3. This design produces only a 24.2 percent loss in overall relative efficiency and a negligible loss in relative efficiency within strata 1 and 2. Seventy-five percent of the sampled MBA students would come from strata 1 and 2. We believe this design would best serve the multipurpose descriptive and analytical needs of the research.

D. Instrument Design

Several questions have been posed for this study: What are the characteristics of those selected and being selected into graduate management education, and are there any systematic differences between those who choose management education as opposed to those who do not. What are the career expectations of MBA students and how much do they differ from those in other programs? How successful are MBA graduates in the world of work? To what extent is graduate success explained by previous type of training, personality characteristics, family background?

Answers to these general questions will help describe the population of MBA students and graduates. At the same time these answers should suggest explanations for the impact of underlying processes of graduate management education--specifically, matriculation and graduation--on later performance in the job market.

One of the rewards of a comprehensive study, such as the one being designed, is to be able to discover patterns and relationships not originally hypothesized. To paraphrase Rosenberg,\(^3\) the study will be rich in serendipitous potentialities and in that sense may not only enrich our knowledge of graduate management education but also become a source for theoretical generalizations. We have approached the definition of areas for data collection with full alertness to this dimension of unexpected discovery as well as to the more specific descriptive and explanatory purposes of the study.

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The first type of questionnaire area constitutes the major sources of independent variables. They comprise personal and family background, occupational history, educational background, financial status and personality characteristics and attitudes.

The second of the questionnaire areas groups most of the dependent variables: decisions on graduate education, expectations regarding MBA programs, and expectations on type and quality of employment. The treatment of a variable as independent or dependent, however, will vary according to the specific analysis being performed.

Existing large scale surveys have been used as extensively as possible as sources of indicators that will cover areas of interest. This strategy will allow us to compare results from the MBA population with those of similar cohorts from the population at large. A side benefit of this strategy is that we will be able to rely upon some questions whose usefulness has already been tested in large survey samples.

The rest of this section will be devoted to a discussion of each of the areas identified for data collection. A preliminary list of indicators by area is presented in Appendix B. This appendix contains a notation to identify the source of operational definitions selected from existing surveys.

**Personal and Family Background.** The inclusion of demographic variables is almost a constant in social research. Attributes such as age, race, sex, and family socioeconomic status are generally perceived as important contributing factors in career aspirations and achievement. Reports of varying degrees of associations between these two sets of variables are so abundant in sociological and educational literature that a detailed analysis of the impact of background variables on the decision to continue graduate education or the selection of business management as a field of study cannot be overlooked. The MBA matriculant survey is especially suited to provide detailed information on these and similar kinds of variables.

One area of particular attention is family history—father's and mother's level of education, field of study, family economic status during adolescence. Family background may not only shape future attitudes toward education and specialization, but may also affect the probability of access to college and graduate education as well as to schools varying in prestige and quality.

The General Social Survey conducted annually by NORC since 1972 is the source for a majority of social indicators on personal and family background listed in the Appendix.
Occupational History. The research goals of the study call for a distinction between those students who enter MBA programs directly after college and those who matriculate into these same programs following a period of employment. A further distinction is required between full-time and part-time students. We expect occupational history to be more extensive for part-time students, many of whom have full-time jobs.

These distinctions directly respond to the need for assessing the differential performance of each of those groups in four areas of analysis: the decision to pursue graduate education, the reasons underlying the selection of business management as a field of specialization, the performance at school, and the achievements in the world of work.

Length of exposure to work as well as type of experience—i.e., type of occupation and industry—are core concerns of this section. Other important and relevant dimensions such as satisfaction with present or most recent job are also a focus of attention.

Two surveys were the main sources of items for this area: NLS-72 a longitudinal survey of high school seniors which extends over a period of fourteen years (NORC is currently conducting the fifth follow-up survey) and the Quality of Employment Survey, a national study of the U.S. labor force that The University of Michigan's Institute for Social Research first conducted in 1969, under the name "Survey of Working Conditions" and replicated in 1972 and 1977.

Educational Background. Although vast amounts of research have been directed to issues involving the impact of demographic variables upon educational access and achievement, considerably less attention has been paid to the effects that a given array of educational factors—i.e., type of program, type of school, individual scores—at each step of the educational ladder may have on the decision to further one's education and enroll in specific types of programs.

The MBA matriculant survey provides an opportunity for collecting the detailed information required to identify educational background predictors and to establish their relationship with the set of variables related to the decision to matriculate into an MBA program.

4 Items on occupational history used in High School & Beyond, a longitudinal study of high school sophomores and seniors initiated in 1980 and now in its third follow-up are almost identical to those in NLS-72.
Educational background indicators were borrowed from the High School and Beyond base year survey of seniors (1980).

**Financial Status.** The incorporation of measures of financial status into the design responds to a two-fold purpose: to characterize MBA candidates in terms of their economic capabilities and to provide basic parameters for a comparison with individuals in the same age bracket from the general population.

Should the survey be repeated, a thorough analysis of financial resources will provide, in addition, relevant base line data at Time I for later comparison. Finally, we note that economically relevant variables cannot, however, be taken independently of economic needs. The amount of family responsibility a student has, for example, will have a bearing on his other real and perceived economic status. In selecting financial status indicators we gave special consideration to these kind of issues.

**Personality Characteristics.** A growing number of studies have considered the issue of "fitness" between prevailing personality characteristics among MBA students and those associated with successful management.5

The common underlying assumption in these studies has been that a certain "type of personality" is required in order to become a good business manager. The accumulated evidence is inconclusive at best. Part of the difficulty in testing hypotheses related to this assumption is that most studies have been limited in scope and based on small samples of students. A second source of difficulty is the wide spectrum of concepts used to characterize the successful executive (i.e., motivation, supervisory skills, self-esteem, status concern). Finally, no clear distinction has been drawn between "innate" personality traits and managerial skills incorporated in the passage through business school.

One research goal of the matriculant survey is to be able to discriminate among predictors of managerial as well as school performance. In this light the relevance of including variables related to personality characteristics in the explanatory model becomes apparent.

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A large nationally representative sample of MBA students will increase the validity of any findings in this research area. A longitudinal design, should that be implemented, will allow the distinction between "innate" behavior patterns and those incorporated through exposure to curriculum, faculty expertise, or the socialization processes in general.

**Attitudes.** In their recent study "Equality in America: The View from the Top," Verba and Orren state: "One of the most compelling and counterintuitive discoveries of social science research over the last 30 years is that the influence of self-interest on most political thought and action is tenuous. Values do not merely rationalize action in accordance with self-interest. Often they arise quite independently of an individual's life experiences and in turn play an independent role in molding political behavior. Such behavior reflects people's group attachments and antipathies, and concern for other purposes that transcend their own immediate situation."\(^6\)

Values and their correlates, attitudes among MBA students, represent an important area for analysis in the matriculant survey. There are four research issues that we propose to investigate:

- What are the prevailing sets of attitudes toward political and economic issues among the population of MBA matriculants?
- What extent do these values/attitudes coincide with those of the general population in the same age cohort?
- To what extent does the exposure to business school reinforce certain types of political and economic attitudes?
- Where do future executives stand as compared to today's business leaders?

Indicators listed under personality characteristics (see Appendix) are merely suggestive. Further exploratory work is needed before a decision is reached on appropriate measures for this area. Items under values/attitudes were drawn from the General Social Survey and from Verba and Orren's leadership study.

\(^{6}\) Verba and Orren op. cit.
**Decision on Graduate Education.** This is a core area of data collection for the MBA matriculant survey. We wish for detailed information as possible on all steps related to the decision to matriculate in an MBA program.

Starting with the first serious consideration of graduate school, we will look into sources of influence on the decision to pursue graduate education, programs considered, influences on program selection, institutions applied to, schools where admitted, factors influencing decisions to apply and matriculate. Results based on these data will contribute to our understanding of the career decision-making process, and to identifying factors that contribute to enrollment in an MBA program.

**Expectations on Type and Quality of Employment.** Expectations regarding future employment play an important role in the selection of educational paths. A considerable number of studies in management education have looked at the relationship between those two sets of variables, a fact that underscores their relevance for a comprehensive study of MBA students. Expectations on organizational as well as job characteristics and importance attached to several dimensions of quality of employment are also considered main targets for data collection. These indicators would also form the basis for comparison with future information on occupational patterns. Several indicators have been borrowed from the 1977 Quality of Employment Survey.

**E. Defining In-Scope and Out-of-Scope Programs**

In order to determine the universe of eligible degree programs, we have examined lists of degrees awarded by business schools and similar departments. This examination revealed four types of degree groups which we expect to encounter when trying to obtain lists of in-scope students from selected schools. The first of these degree groups consists of the MBA degree and direct substitutes. The second group consists of joint MBA degree programs. The third group consists of specialized business degrees which may not be similar enough to the MBA to justify inclusion. The fourth group consists of degrees which are definitely not the subject of the present research. Appendix C contains the list of these degree groups. If a school offers an in-scope degree, then the program awarding that degree is included in the universe of in-scope management degree programs.

Schools on the master list of graduate management degree programs comprise the population of schools eligible to be sampled. The sampling probabilities and the subsequent sample weights will depend on the size of the in-scope program at each school. For this reason we have used several sources to construct the in-scope program
list in Appendix C. We have identified four groups of programs. Group I programs are definitely in-scope. They define what we mean by an MBA degree. Group II programs are definitely in-scope since they combine an MBA degree with a specialized degree in another field. Group III programs are out-of-scope unless we determine that they satisfy the additional criteria discussed below. Group IV programs are definitely out-of-scope. They are substantively different from an MBA degree. The delineation of in-scope and out-of-scope programs was conducted by the design team in consultation with GMAC.

All of the programs listed in Groups I and II are considered in-scope because of their fundamental similarity to the basic MBA and MM degrees. To demonstrate this basic similarity, consider the degree awarded by several well-known business or management programs:

- **MBA**: Columbia, Dartmouth, Indiana, Harvard, Stanford, Pennsylvania, Virginia, Michigan, Chicago, UC-Berkeley, UC-Los Angeles, Texas, Cornell
- **MM**: Northwestern
- **MPPM**: Yale
- **MSIA**: Carnegie-Mellon
- **MSM**: MIT

We placed all of these degrees into Group I. This group constitutes the working definition of a graduate management degree. Since degree programs in Group II are joint with the MBA, they are also in-scope.

The degree programs in Group III will be considered out-of-scope when they are awarded by a school or department which does not also award a Group I degree. We determined in our exploratory survey of 30 AACSB accredited schools (see list in Appendix E) that the accredited graduate management program generally has the authority to award some of the degrees in Group III. Students in those degree programs matriculate, register, and graduate with the regular MBA students. Although some of the Group III degrees appear specialized relative to the MBA, it seems unreasonable to
exclude degrees that are awarded by accredited graduate management schools. If these degrees are only offered under the authority of administrative units which are not AACSB accredited (e.g., engineering, science, arts and letters, social work, and public administration) then the degree will be considered out-of-scope. Group III degrees which we cannot resolve will remain out-of-scope on the grounds that they are too rare to categorize.

Most of the Group IV degrees are obviously out-of-scope. However, the Master of Public Administration degree requires further comment. This degree is awarded by the John F. Kennedy School of Government at Harvard and the Woodrow Wilson School at Princeton among others. The educational programs at these schools place a strong emphasis on public sector administration. We define this educational emphasis as out-of-scope for a survey primarily focused on graduate management education for the private sector. Although there are many similar courses in both types of programs, one of the primary research goals of the GMAC survey is the study of the characteristics of students who choose MBA programs. At Harvard this clearly means the business school and not the government school. At Carnegie-Mellon this clearly means the school of industrial administration and not the school of urban and public affairs. This rule excludes Princeton from the universe of schools. At schools like Northwestern, Yale, and MIT where both public and private management are covered in the same curriculum with no distinction in the degree awarded, we designate the degree program as in-scope based on the widely held view that the program is essentially equivalent to an MBA for most students.

Locating in-scope programs

Our efforts to locate all in-scope programs have made use of two distinct lists of schools that may have such programs. The first list, based on the Official Guide to the MBA, consists of all full- and part-time programs listed in the 1984 version of the Guide. The second list consists of schools which offer graduate management education according to the National Center for Education Statistics (NCES) Directory of Higher Education. Both lists contain only those programs or schools that are located in the United States. There are no known out-of-scope programs on the Official Guide list. Out-of-scope programs have been removed from the NCES list. Programs with no degrees awarded in the 1981-82 academic year were also removed from the NCES list. Then, we merged the Official Guide list with the remaining schools on the NCES list.

This procedure produced a master list which includes all schools that are either listed in the Official Guide or listed in the NCES Directory. However, if the school is
only listed in the NCES Directory the only way to determine if it gives graduate management degrees is to count the number awarded. The total number of graduate management degrees awarded by the schools in the NCES directory is 61,432 (for 1981-82) this corresponds to the usually quoted but never cited "official" figure. Schools that awarded no graduate management degrees in 1981-82 and are not listed in the 1984 Official Guide almost certainly do not have a graduate management program. Our calculations based on the master list indicate that we are unlikely to have excluded any school from the frame inappropriately. However, we can add schools to the master list on an ad hoc basis if we are provided with some enrollment evidence which indicates that the school belongs on the list.

F. Administration of the Matriculant Survey

We considered two methods for data collection on the Matriculant Survey: questionnaires administered in groups at each school site, and questionnaires mailed directly to the students. Both methods present advantages and shortcomings.

Group administration is generally associated with higher rates of return. The conditions surrounding the administration of the survey---group setting, specific time span and presence of interviewer---may also increase the quality of information that is being collected.

One drawback of this option for data collection is related to the burden it imposes on schools. In addition to contacting selected students for participation in the survey, school support normally includes the lending of a space and the assignment of a staff person to assist the NORC representative research party in the coordination of activities.

Another shortcoming becomes apparent when specific characteristics of this study are taken into consideration. An exploratory survey of 30 business schools is now underway. Results yielded so far, indicate that registration dates vary across schools and sometimes within schools for full- and part-time students. Conversations held with school officials suggest that registration and orientation are extremely hectic times for staff and students, who are concerned with registration procedures, selection of courses and scheduling. Moreover, lists of matriculants are not reliable until after enrollment

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7 See appendices.
time. The proportion of non-matriculants among those admitted ranges from 15 percent up to as high as 30 percent.

Even if burden issues were left aside, the tailoring of field activities to fit individual school schedules and the locating of selected students from earlier lists of matriculants would considerably increase the costs of the study. And follow-up effort (phone calls, mailed or drop-off questionnaires) needs to be targeted to selected students who are absent the day of the administration of the survey.

Therefore, we have concluded that in this case the merits of using mailed questionnaires for data collection outweigh any limitations associated with this particular method of survey administration. Furthermore, methodological literature as well as NORC's longstanding experience, point to the fact that properly timed follow-ups increase return rates to desired levels of 85 percent or 90 percent.

Exploratory results so far suggest that in order to account for a majority of first year matriculants, the administration of the survey should occur twice during the academic year. The timing of the two administrations, will have to be decided upon further information from the schools. It is our current belief that one administration during the fall and one in spring will probably fit most of the individual school variations. A mailed survey will be less costly and more flexible should we need to tailor the timing of the administration to varied demands from a number of schools.

Strong support from the schools contributes to the perceived legitimacy of the survey, and as a consequence yields higher rates of returns. Ongoing conversations with school officials suggest that schools will be willing to provide cooperation in two ways; first, by addressing a letter to all selected students, encouraging participation in the survey (the letter will be signed by a school authority such as the Dean of Business Programs, or the Dean of Students), second, by distributing the questionnaires and the return stamped envelopes provided by NORC among the selected students. Support from the schools will also include the release of lists of new matriculants to NORC following registration.

Formal contacts with sampled schools will be initiated with a letter from NORC, explaining the purposes of the study, sponsorship, and its importance relative to the understanding of graduate management education and core issues for decision making in business schools. The letter will be accompanied by a brief statement of NORC capabilities and a Project Information Bulletin prepared by GMAC. The letter will be
followed by a phone call from a NORC representative, to secure school participation and coordinate efforts.

Questionnaires will be self-administered. Given the composition of the sample—graduate level students—we do not foresee any problems related to the understanding of questions or following of skip patterns. The development of the instrument is nearing completion. At this point we are aiming for an hour or hour and a quarter long questionnaire, which would include approximately 80 questions.

G. Pretest

A pretest of the instrument and administration procedures is in progress. The aim of the pretest is to replicate as closely as possible the conditions of the full-scale survey. Instrument aspects such as wording of questions, sequence, skip patterns and length constitute one set of components of this field effort. A second set of components relates to administration procedures and materials used in contacting schools, locating and contacting students, distributing questionnaires.

The pretest is being conducted in selected business schools in the Chicago area. These are DePaul University, Loyola University, Northwestern University, and The University of Chicago. Criteria for selection was primarily the number of full- and part-time students matriculating in the summer. We wanted to be certain that part-time programs are represented in the pretest.

The target population for the pretest is MBA candidates who will matriculate as first year students during the summer of 1985. We are planning to survey approximately 165 students.

Contacts with all schools in the area have been initiated. Basic information regarding expected enrollment for the summer term, registration time, proportion of full- versus part-time students, availability of lists of matriculants has been collected. Contacts with selected schools and students will follow all steps described in the preceding section.

Patterns of response as well as difficulties with questionnaire items and administration procedures will be analyzed. A section for respondent comments has

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8 For a detailed analysis of proposed areas for inquiry, see Appendix B.
been incorporated in the questionnaire for pre-test purposes. Results of this section will also be a part of the analyses. Modifications in the instrument and procedures will be tailored according to results of these analyses.
APPENDIX A

Table of Relative Efficiencies From Different Disproportionate Allocations Among School Strata

<table>
<thead>
<tr>
<th>No. of Sampled Schools</th>
<th>Efficiency Of Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strata 1-2</td>
</tr>
<tr>
<td>Stratum 1</td>
<td>Stratum 2</td>
</tr>
<tr>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>10</td>
<td>43*</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
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<tr>
<td>10</td>
<td>55</td>
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<td>10</td>
<td>60</td>
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<tr>
<td>10</td>
<td>65</td>
</tr>
<tr>
<td>10</td>
<td>70</td>
</tr>
<tr>
<td>10</td>
<td>75</td>
</tr>
</tbody>
</table>

*Proportional distribution given 10 schools in stratum 1.
APPENDIX B

Summary of Representative Indicators from Surveys Related to the GMAC MBA Matriculant Survey

Personal and Family Background

GSS Parent's occupation (when R ____ years old/growing up/adolescence/childhood)
GSS Industry worked for
GSS Type of employment (self-employed/worked for someone else)
HS&B '84 Highest level of education
Field of study (college and/or graduate school)
GSS Length of mother employment after marriage
GSS Time in the labor force (when R ____ years old/growing up/adolescence/childhood)
GSS Number of siblings
GSS Type of residence (when R ____ years old/growing up/adolescence/childhood)
GSS Family income relative to American families in general (when R ____ years old/growing up/adolescence/childhood)
GSS Parents national origin
GSS Grandparents national origin
GSS R's race
GSS R's age
GSS       R's sex
GSS       Marriage status
GSS       Age of 1st marriage
GSS       Number of divorces
NLS-72 '85 Spouse's occupation during first week _________ 1985
NLS-72 '85 Kind of industry job was in
NLS-72 '85 Duties in the job
NLS-72 '85 Type of employment (self employed/worked for someone else)
NLS-72 '85 Starting date at this job
NLS-72 '85 Currently working at this job
NLS-72 '85 Number of hours working per week
NLS-72 '85 Net earnings per week
HS&B '85   Highest level of education
GSS       Spouse nationality or ethnic background
NLS-72 '85 Expected number of children
NLS-72 '85 Date expected to have first/next child
NLS-72 '85 Number of children ever had
NLS-72 '85 Number of children adopted, stepchildren, or foster care
NLS-72 '85 Each child birth date and sex
### Occupational History (Up to 4 jobs)

<table>
<thead>
<tr>
<th>NLS-72 '85</th>
<th>Kind of job or occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NLS-72 '85</td>
<td>Industry</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Main activities or duties on the job</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Type of employment (self-employed - work for someone else)</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Starting and ending date in this job</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Starting salary</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Current salary</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Hours worked per week</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Reasons for leaving job</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Any other job</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Training programs in most recent full-time job</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Purpose of training program</td>
</tr>
<tr>
<td></td>
<td>to improve skills</td>
</tr>
<tr>
<td></td>
<td>to prepare for new job</td>
</tr>
<tr>
<td></td>
<td>to prepare for new career</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Periods of unemployment</td>
</tr>
<tr>
<td>NLS-72 '85</td>
<td>Unemployment Insurance</td>
</tr>
</tbody>
</table>
| QoE '77    | Degree of satisfaction with the following aspects of present or most recent job:
Chances to make friends
Chances for promotion
People you work for are friendly and helpful
Opportunity to develop own special abilities
Travel to and from work is convenient
Receive enough help and equipment to get the job done
Not asked to do excessive amounts of work
Work is interesting
Have enough information to get the job done
Pay is good
Given a lot of freedom to decide how you do your own work
Given a chance to do the things you do best
Job security
Problems expected to solve are hard enough
Supervisor is competent in doing his/her work
Responsibilities are clearly defined.
Given enough authority to do job
Fringe benefits
Physical surroundings
Can see the results of own work
Can forget about personal problems
Have enough time to get the job done
Supervisor is very concerned about the welfare of those under him/her
Free of conflicting demands that other people make of you
Hours are good
Supervisor is successful in getting people to work together
Promotions are handled fairly
The people with whom you work take personal interest in you
Employer is concerned about giving everyone a chance to get ahead
Supervisor is friendly
Supervisor is helpful in getting the job done
People you work with are helpful in getting the job done
People you work with are competent in doing their jobs
People you work with are friendly
Educational Background

HS&B '80 Name and location of High School attended (up to 3)
Type of School:

1. Vocational, agricultural, business, distributive education, health occupations, home economics occupations, technical occupations, trade or industrial occupations

2. General

3. Academic or college preparatory

HS&B '80 Public or Private
HS&B '80 Date started attending this school
HS&B '80 Date left this school
            Full or part-time student
HS&B '80 Actual field of study or training during last month attended
HS&B '80 Kind of certificate, license, diploma or degree were you studying for during last month attended
HS&B '80 Completed requirements for that certificate, degree or diploma from this school

HS&B '80 Attended a second high school or a third high school
Name and location of college attended (up to 3)
Kind of school (junior or community college--2 years, college or university--4 years or more)
Public or private
Date started attending this school
Date left this school
Full or part-time student
During last month attended, what was actual field of study or training during last month attended
Kind of certificate, license, diploma or degree studying for during last month attended
Completed requirements for that certificate, degree or diploma from this school
Attended a second college or a third college
Name and location of school/university attended for graduate or professional education (up to 3)
Kind of school (independent graduate/professional)
Public or private
Date started attending this school
Date left this school
Full or part-time student
Field of study or training during last month attended
What kind of certificate, license, diploma or degree studying for during last month attended
Completed requirements for that certificate, degree or diploma from this school
Attended a second college? A third college?

School Financing (Two more recent periods attended school)

NLS-72 '85 Charges for:

Tuition and fees
Room, board and living expenses
Resources:
Money earned
Part-time job
Teaching assistantships
Loans:
Amounts
Sources
Debt on loans
Other forms of assistance
Average number of days lived with parents for the last 4 years
Current Financial Status

NLS With whom did R live the first week of June, 1985

NLS Income by items

Items owned, purchased in the last 12 months, plan to purchase in the next 12 months:
stereo equipment, computer, camera, VCR, movie camera, movie projector, slide projector.

Primary place of residence

Own private house
Own co-op or condominium
Rent your home
Rent an apartment

IF OWN, current market value of house or apartment

Passenger cars owned by R and other persons in R’s household. For each car—Make, Model, Year

Plan to buy a car in the next 12 months

Model type (sub-compact, compact, intermediate, standard, luxury)
Type of car (domestic, imported/Japanese, imported/European)
Price (check categories)

Credit cards have/credit cards used in the last 3 months

Banking, investments, securities
Liabilities, debts

Properties, mortgages
Back taxes
Loans (home improvement, education, etc.)
Hospital, doctor bills
Credit cards
Car/s

NLS-72 '85 Income Sources

Own wages salaries, commissions, or tips
Own net income from a business or farm
Spouse's (husband or wife) wages, salaries commissions, or tips, and his or her net income from a business or farm
Dividends, interest, rental income, investment income (including spouse's)
Social Security benefits (including spouse's)
Veteran's benefits (including spouse's)
Unemployment compensation
Spouse's unemployment compensation
Public assistance, welfare, AFDC, etc. (including spouse's)
Income received as gifts from relatives or friends
Scholarships, fellowships, grants, loans, etc.
Nontaxable income not included above (including spouse's)
Child support payments
QoE '77

Perception of total income relative to monthly expenses and bills
Perception of own earnings relative to monthly expenses and bills
Perception of total income to live as comfortably as one would like
Personality Characteristics

Self selection characteristics (areas to be measured)

Self-esteem (scale)
Status concern (scale)
Values (see below)
Political/Economic preferences (see below)

Qualities associated with successful business managers and executives. (Areas of strength to be assessed.)

Initiative
Communication skills
Planning skills (appropriate allocation of time, resources, anticipation of changes in environment)
Problem solving ability
Adapt theory to practical situations
Delegate to others
Coordinate actions to meet objectives
Assertiveness
Adapt to and capitalize on change
Adjust and act according to organizational moves

Reading patterns.

Type and frequency: newspapers, magazines
Type and frequency: books
Public activities involved in:

- Voted in federal, state or local election
- Wrote to the editor of a magazine or newspaper
- Wrote to an elected official about some matter of public business
- Wrote something that has been published
- Personally visited an elected official to express a point of view
- Addressed a public meeting
- Took an active part in some local, civic issue
- Actively worked for a political party/candidate
- Engaged in fund raising
- Actively worked as a volunteer (non-political)
Values

GSS             Importance of life aspects (rank or scale)

a. One’s own family and children
b. Career and work
c. Free time and relaxation
d. Friends and acquaintances
e. Relatives
f. Religion and church
g. Politics and public life

Verba’s          Political/Economic Preferences
Leadership
Survey          Degree of agreement with following statements

If a company has to lay off part of its labor force, the first workers to be laid off should be women whose husbands have jobs.

If blacks are not getting fair treatment in jobs, the government should see to it that they do.

The country would be better off if business were less regulated.

White people have a right to refuse to sell their homes to blacks.

There should be a law limiting the amount of money any individual is allowed to earn in a year.

It is the right of a woman to decide whether to have an abortion.

The majority of American women do not agree with the leaders of the feminist movement.
Racial integration of the public elementary schools should be achieved even if it requires busing.

Businessmen have too much power for the good of the country.

Lesbians and homosexuals should not be allowed to teach in the public schools.

Women are usually less reliable workers than men.

The news media are too critical of American institutions.

The Equal Rights Amendment, which aims at eliminating distinctions in the treatment of men and women, should be ratified.

All except the old and the handicapped should have to take care of themselves without social welfare benefits.

The government should work to substantially reduce the income gap between rich and poor.

Trade unions have too much power for the good of the country.

The interests of employers and employees are, by their very nature, basically opposed.

The news media pay too much attention to minority groups.

Public financing is a fairer way to pay for political election campaigns than is private financing.

Achieving equality for women

Maintaining a strong military defense
Protecting freedom of speech
Curbing inflation
Developing energy sources
Reducing the role of government
Fighting crime
Achieving equality for blacks
Reducing unemployment
Giving people more say in government decisions

Verba’s Leadership Survey Opinion Scales

The government in Washington should see to it that everyone has a job.

It is not the role of government to see to it that everyone has a job.

<table>
<thead>
<tr>
<th>In Between</th>
<th>No Opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

If women tried harder, they could get jobs equal to their ability.

Discrimination makes it almost impossible for most women to get jobs equal to their ability.

(Scale)

The main cause of poverty is that the American system doesn't give all people an equal chance.

Those who are poor almost always have only themselves to blame.

(Scale)
Quotas in school admissions and job hiring should be used to insure black representation.

School admission and job hiring should be based strictly on merit.

(Scale)

Workers should have more say in important decisions than they do now.

The important decisions should be left to management.

(Scale)

If blacks would try harder, they could be just as well off as whites.

Social conditions make it almost impossible for most blacks to overcome poverty.

(Scale)

Verba's Leadership Survey

Degree of Financial support should federal government provide to each of the following if they are in serious financial trouble

Corporations providing necessary services, such as railroads

City or state governments

Individuals who can’t support themselves

Foreign countries friendly to the U.S.
Verba's affairs survey

R's interest in international, national and local Leadership

<table>
<thead>
<tr>
<th>One of my major concerns</th>
<th>1</th>
<th>International affairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate concern</td>
<td>2</td>
<td>National affairs</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Local affairs</td>
</tr>
<tr>
<td>I pay little attention</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
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<tr>
<td></td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
Decision on Graduate Education

Time of serious consideration
Sources of information
Sources of influence
Factors making graduate education attractive:
  Prestige
  Occupational or social mobility
  Not enough demand or for college graduates
  Academic interest in specific fields
  Higher standard of living
  New or better social circles

List of programs considered

Factors influencing program selection
  Length of program
  Employment opportunities at graduation
  Academic interest
  Prestige
  Family history in field
  Change of career
  GMAT or other undergraduate scores related to specific field skills and abilities

Name and location of all institutions to which applied for graduate education.

Type of programs, degree sought and dates admitted.

Name and location of all institutions to which admitted for graduate education. Type of programs, degree sought and dates admitted.

Institutional characteristics influencing decision to apply.
Institutional characteristics influencing decision to matriculate.
  Cost of programs
  Financial aid available
  Reputation of institution
  Ranking of specific program
School location
Faculty reputation
Family interests
Type and quality of jobs available to graduates
Family ties to institution
Particular specialization offered at school
Character of student body
Work options while enrolled
Assessment of credentials required for admission
Quality of social life at school
Student/Faculty ratio
Resources available (libraries, computer)
Quality of publications
Expectations on Type and Quality of Employment

Type of job (main duties)
Starting position
Next position after ____ years
Kind of place (industry)
Type of employment (Self-employed or working for someone else)
Location of company
Size of company (i.e., Fortune 500)
Factors considered important and/or specific ranges
  Sales
  Assets
  Profits
  Number of employees
  Earnings per share
  Growth rate
  On going operation vs. new venture
  Produce a product vs. provide a service

QoE '77
Salary
Fringe benefits -
  Medical, surgical, or hospital insurance
  A retirement program (after ____ yrs.)
  Profit sharing
  Stock options
  Free or discounted meals
  Free or discounted merchandise
  A place for employees children to be taken care of
  Maternity leave with pay
  Maternity leave with full-employment rights
  Moving expenses
  Sick leave with full pay
  Dental benefits
  Eyeglasses or eyecare benefits
A place for employee's children to be taken care of while parents are working
Life insurance that would cover a death occurring for reasons not connected with your job
Legal aid or services
A training or education program you can take to prove your skills
Paid vacation

QoE' 77
Importance of job facets (comfort, challenge, financial rewards, relations with co-workers, resource adequacy, promotions).

Given a lot of chances to make friends
The chances for promotion are good
The people you work for are friendly and helpful
Opportunity to develop own special abilities
Travel to and from work is convenient
Receive enough help and equipment to get the job done
Not asked to do excessive amounts of work
The work is interesting
Have enough information to get the job done
Pay is good
Given a lot freedom to decide how to do own work
Given a chance to do the things you do best
Job security is good
The problems you are expected to solve are hard enough
Supervisor is competent in doing (his/her) job
Responsibilities are clearly defined
Enough authority to do job
Fringe benefits are good
Physical surroundings are pleasant
Can see the results of own work
Can forget about personal problems
Have enough time to get the job done
Supervisor is very concerned about the welfare of those under (him/her)
Free of conflicting demands that other people make of you
Hours are good
Supervisor is successful in getting people to work together
Promotions are handled fairly
The people with whom you work take personal interest in you
Employer is concerned about giving everyone a chance to get ahead
Supervision is friendly
Supervision is helpful in getting the job done
People you work with are helpful in getting the job done
People you work with are competent in doing their jobs
People you work with are friendly
APPENDIX C

In-scope and Out-of-scope Programs for GMAC Survey

Group I
The following master’s degree programs are similar enough in content and purpose to define the basic in-scope programs:

- M.B.A. Master of Business Administration
- M.M. Master of Management
- M.B.M. Master of Business Management
- M.B.P.A. Master of Business and Public Administration
- M.B.P.M. Master of Business and Public Management
- M.I.B.A. Master of International Business Administration
- M.I.B.S. Master of International Business Studies
- M.I.M. Master of International Management
- M.P.P.M. Master of Public and Private Management
- M.S.A. Master of Science in Administration
- M.S.B. Master of Science in Business
- M.S.B.A. Master of Science in Business Administration
- M.S.I.A. Master of Science in Industrial Administration
- M.S.I.B. Master of Science in International Business
- M.S.I.M. Master of Science in Industrial Management
- M.S.M. Master of Science in Management
- E.M.B.A. Executive Master of Business Administration
- I.B.M.B.A. International Bilingualist M.B.A.

Group II
The following joint degree programs are in-scope.
They would remain in-scope if the M.B.A. part of the degree were replaced by any of the master’s degrees listed in Group I:

- M.B.A./B.A. or B.S. combined with Bachelor degree
- M.B.A./C.P.A. combined with Certified Public Accountant
- M.B.A./D.B.A. combined with Doctor of Business Administration
- M.B.A./D.M.D. combined with Doctor of Medicine in Dentistry
M.B.A./J.D. combined with Juris Doctor
M.B.A./M.Arch. combined with Master of Architecture
M.B.A./M.A. combined with Master of Arts
M.B.A./M.D. combined with Doctor of Medicine
M.B.A./M.E. combined with Master of Engineering
M.B.A./M.P.H. combined with Master of Public Health
M.B.A./M.P.M. combined with Master of Public Management
M.B.A./M.S.W. combined with Master of Social Work
M.B.A./M.U.P. combined with Master of Urban Planning
M.B.A./Ph.D. combined with Doctor of Philosophy

Group III

These degrees are considered out-of-scope pending a survey of AACSB accredited schools to determine if any of these degrees are awarded by the accredited graduate program:

M.Acc. Master of Accountancy (or Accounting)
M.A.S. Master of Accounting Science
M.B.E. Master of Business Economics
M.C.S.M. Master of Computer Systems Management
M.M.R. Master of Marketing Research
M.O.B. Master of Organizational Behavior
M.P.A. Master of Professional Accountancy
M.P.E.R. Master of Personnel and Employee Relations
M.S.A. or M.S.Ac. Master of Science in Accountancy
M.Sc. Master of Management Science
M.S.F. Master of Science in Finance
M.S.I.S. Master of Science in Information Systems
M.S.M. Master of Science in Marketing
M.S./M.I.S. Master of Science Management Information Systems
M.S.O.B. Master of Science in Organizational Behavior
M.S.O.D. Master of Science in Organizational Development
M.S.P.A. Master of Science in Professional Accountancy
Group IV

These programs are definitely out-of-scope on the grounds that they are not close substitutes for Group I degrees:

<table>
<thead>
<tr>
<th>Degree Code</th>
<th>Degree Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.A.</td>
<td>Bachelor of Arts, any field</td>
</tr>
<tr>
<td>B.B.A.</td>
<td>Bachelor of Business Administration</td>
</tr>
<tr>
<td>B.S.</td>
<td>Bachelor of Science, any field</td>
</tr>
<tr>
<td>D.B.A.</td>
<td>Doctor of Business Administration</td>
</tr>
<tr>
<td>Ed.D.</td>
<td>Doctor of Education</td>
</tr>
<tr>
<td>Ed.S.</td>
<td>Educational Specialist in Business Administration</td>
</tr>
<tr>
<td>M.A.</td>
<td>Master of Arts, any field</td>
</tr>
<tr>
<td>M.D.</td>
<td>Doctor of Medicine</td>
</tr>
<tr>
<td>M.Ed.</td>
<td>Master of Education</td>
</tr>
<tr>
<td>M.E.M.</td>
<td>Master of Engineering Management</td>
</tr>
<tr>
<td>M.H.A.</td>
<td>Master of Health Administration</td>
</tr>
<tr>
<td>M.P.A.</td>
<td>Master of Public Administration</td>
</tr>
<tr>
<td>M.P.H.</td>
<td>Master of Public Health</td>
</tr>
<tr>
<td>M.P.I.A</td>
<td>Master of Political and Institutional Management</td>
</tr>
<tr>
<td>M.P.M</td>
<td>Master of Public Management</td>
</tr>
<tr>
<td>M.P.S.</td>
<td>Master of Professional Studies</td>
</tr>
<tr>
<td>M.P.S.H.Ad.</td>
<td>Master of Prof. Studies in Hotel Administration</td>
</tr>
<tr>
<td>M.Q.S.</td>
<td>Master of Quantitative Systems</td>
</tr>
<tr>
<td>M.S.</td>
<td>Master of Science, any field not in Groups I-III</td>
</tr>
<tr>
<td>M.S.Ed.</td>
<td>Master of Science in Education</td>
</tr>
<tr>
<td>M.S.I.</td>
<td>Master of Science in Insurance</td>
</tr>
<tr>
<td>M.S.T.</td>
<td>Master of Science in Taxation</td>
</tr>
<tr>
<td>M.S.W.</td>
<td>Master of Social Work</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>Doctor of Philosophy</td>
</tr>
</tbody>
</table>
APPENDIX D

Issues Explored in Preliminary Survey of Schools

1) Categories of students for whom records are kept:
   Applied but not admitted
   Admitted but not enrolled
   Enrolled

2) Information included on student records:
   Type of programs enrolled in
   Full or part-time enrollment
   Type of address (i.e. campus, permanent, parents)
   Academic history (i.e. credentials, GMAT Scores, other scores)

3) Length of time records are kept for different student categories:
   Applied but not admitted
   Admitted but not enrolled
   Enrolled

4) Forms of records kept at school:
   Paper/photostat
   Microfilm/Fiche
   Machine-readable disks/tape

5) Access to records:
   Protocol (i.e. written permission required of school, students)
   Most useful data for finding/sorting individual student records (i.e. Name, SSN, Student ID)
APPENDIX E

Schools Contacted in Preliminary Survey

Atlanta University
Graduate School of Business Administration

Boston University
School of Management

Carnegie-Mellon University
Graduate School of Industrial Administration

Columbia University
Graduate School of Business

Dartmouth College
Amos Tuck School of Business Administration

DePaul University
Graduate School of Business Administration

Florida State University
College of Business

Harvard University
Graduate School of Business Administration

Hofstra University
School of Business

Illinois Institute of Technology
Stuart School of Business Administration

Loyola University of Chicago
The Graduate School of Business
Massachusetts Institute of Technology  
Sloan School of Management  

Michigan State University  
Graduate School of Business Administration  

Northwestern University  
J.L. Kellogg Graduate School of Management  

Southern Methodist University  
Edwin L. Cox School of Business  

Stanford University  
Graduate School of Business  

Texas A&M University  
College of Business Administration  

University of Arizona  
College of Business and Public Administration  

University of California, Berkeley  
Graduate School of Business Administration  

University of Chicago  
Graduate School of Business  

University of Denver  
Graduate School of Business and Public Management  

University of Illinois at Chicago  
College of Business Administration  

University of Michigan  
Graduate School of Business Administration  

University of North Carolina at Chapel Hill  
Graduate School of Business Administration
University of Pennsylvania  
Wharton School Graduate Division  

University of Rhode Island  
College of Business Administration  

University of Southern California  
Graduate School of Business Administration  

University of Tulsa  
College of Business Administration  

University of Virginia  
Colgate Darden Graduate School of Business Administration  

Virginia Polytechnic Institute and State University  
College of Business  

Washington State University  
College of Business and Economics
APPENDIX F

ANNOTATED BIBLIOGRAPHY


The study examined the moderating effect of the personality variable of excellence on the predictive effectiveness of multi-attribute attitude model. Data were collected from Master's students in business administration at four Canadian universities. Analysis indicated that the students who scored high on excellence showed a stronger correlation between attitude and intention to enter a program than the students who scored low. It was speculated that excellence has potential as a segmentation variable for complex, high involvement products.


Many sociological and economic studies assume that the variable, Highest Grade Completed in School, is by itself an adequate measure of people's education for the purpose of explaining their occupational achievement. Use of Highest Grade Completed as the sole measure of education has at least two major shortcomings. It assumes people have (1) learned the same amount of (2) the same thing in an academic year. Supplementary education indicators are identified and tested to see if they have a substantial impact on occupational prestige or earnings. Background social status and Highest Grade Completed are controlled for in this test. Only measures of subject matter studied in high school or college have a statistically significant relationship with occupational achievement net of Highest Grade Completed and social background variables. Highest Grade Completed is quite adequate in measuring the impact of education on occupational achievement without help from the measures of subject matter studied.

The 1984 survey of freshman reveals several continuing trends. It showed increasing materialism, reflected in preferences for careers in business, the professions, and engineering. The data also show declining student participation in government aid programs. High school grade inflation declined and further evidence of the growing role of computers in education was found. The percentage of students aspiring to careers in business continued to rise. (See Green, Astin, Korn, McNamara)


This is the annual report of national normative data on characteristics of students entering college as first-time, full time freshmen in 1982. The purpose of the study is to determine the effects of college on students. The normative data presented is based on responses from 188,692 freshmen entering 350 institutions at which the coverage of entering freshmen was judged to be representative. The survey was designed to serve two functions. First, to obtain student input data for longitudinal research, and second, to obtain standardized descriptive and normative data for general information. Such information includes biographic and demographic data on the students, high school background, career plans, educational aspirations, financial arrangements, high school activities, and current attitudes.


This study examined the factors personnel managers consider to be most important in helping graduating business students to obtain employment and which specific courses of study they considered to be most valuable in helping prepare business students for management/administrative positions. The results of a survey sent to personnel managers suggest that academia and the business community are out of sync in terms of business school curricula and the kinds of graduates needed. Responding personnel directors felt that both oral and written communication skills were far more important than the specific degree held, grade point average, or accreditation of the school attended. The message was that graduating business students do not communicate well. The author suggests that the academic community might address this problem by increasing the writing and oral communications requirements in business courses. Also, a blending of general education requirements with functional business courses together with less emphasis on functionality and narrow specialization in business education is recommended.

With universities facing enrollment ceilings and with increased competition for admission to graduate programs, it has become increasingly important for admissions committees to select those applicants who are most likely to complete their degrees. This study was concerned with the accuracy with which successful completion of the Master of Business Administration (MBA) degree could be predicted from readily available admissions data: sex of the student, student age, undergraduate grade point average, Graduate Management Admission Test (GMAT) Verbal score, and GMAT Quantitative score. As a mechanism for evaluating the predictive accuracy of the MBA admissions data, discriminant analysis was used. The sample for this study consisted of all students who had begun and in some way had concluded their MBA studies between 1969 and 1979. This total sample (N=507) was randomly split into two parts, one part for deriving the discriminant function and one part for cross-validating the derived discriminant function. The results of the discriminant analysis clearly showed that the two criterion groups (graduates and nongraduates) could be differentiated. In addition, the utility of the discriminant function derived from one sample was demonstrated on the cross-validation sample. Of the students in this hold-out sample, 69% of those predicted to graduate actually did.


This paper examined the degree of compatibility between the job values of college seniors, their professors, and their employment recruiters. Students with higher grades demonstrated job values that were more intrinsic in nature than those of students with lower grades. Graduates with the better grades had job values that were more like those of the professors than did students with lower levels of academic achievement. Conversely, those seniors with lower grade point averages had value structures that were more like those of the recruiters than did the achieving students. Unfortunately, most recruiters interviewed only the graduates with higher grades, thus magnifying the divergence in job values. Professors, having intrinsic values, were concluded to have more influence on the value structures of the achieving student but considerably less influence on students with the lower grades. It was recommended that professors and recruiters examine those areas of discrepant value perceptions in an effort to achieve greater job value compatibility and more effective student guidance. Professors should
become more conscious of the influence that they exert on student job values, especially on those of the achieving student. Recruiters, in turn, should recognize that their job value emphasis during the recruitment process is considerably more extrinsic in nature than the true aspirations of the applicants. Educators and employers should renew efforts to eliminate the dichotomy that exists for the college student between academia and the business world. Sensitivity in respect to the intrinsic job value structures of today's college student is imperative in order to place the student in that field of study and that position of employment that will fulfill his aspirations and lead to a productive and meaningful career.


This book explains how to locate participants in panel or follow-up studies. It outlines a tracking strategy that maximizes the number of panel members located and minimizes tracking costs. It summarizes a number of successful panel studies and informs researchers about what was done and how successful it was and presents considerable detail regarding the development and execution of the tracking phase of the Career Development Study. The book presents details on how to identify and use information sources, suggests ways to contact a particular information source, and provides insights and solutions to problems that may occur during tracking. Heavy emphasis is placed on cross-sectional research. Together with volume one, Design In a Study of Entry into Careers, this provides new material on the process of conducting a panel study.


There was a rapid increase in Ph.D's and professional degrees for women in the 1970's. This change can be best explained by the changing expectations of women students and school administrators about the costs and rewards of advanced degrees for women. The change cannot be explained by socialization theories. The paper examines national trends in women's enrollment in Business Schools and presents a case study of one school. The evidence indicated that many expectations changed simultaneously around 1970, resulting from the women's movement and government and governmental action. Administrators expected corporations to hire women graduates and women expected to be welcomed at schools. Therefore school policies changed and applications from women rose. Changes occurred more rapidly at prestigious cosmopolitan schools.

This report summarizes a research effort designed to develop and predict criteria of business school performance as well as career progress. The major findings are: 1) The structure of the criterion domain is complex and varies with respect to both meaning and predictability across broad categories of management positions and responsibilities. That is, the definitions and requirements for career progress of those in staff positions are often not the same as for line positions. 2) ATGSB test scores, undergraduate grades, and index of undergraduate school quality (CES), the information most commonly used in admissions decisions, were found to contribute in varying degrees to the prediction of post business school career progress, although not consistently for all criterion factors or across career subgroups. Selected personality, leadership, and motivational characteristics become relatively more important than the traditional aptitude and achievement measures in predicting post business school criteria. Whether these noncognitive characteristics can be developed or enhanced in graduate business school is unresolved, but it is possible to take them into account in admissions decisions. 3) Ratings by faculty with respect to various personal characteristics gathered in undergraduate school or at some time in graduate school do predict future performance on selected post-graduate business school criteria.


Work preferences and preparation (college major) are included in an analysis of the gender differential in earnings among recent college graduates, using data from the National Longitudinal Studies of the High School Class of 1972. The results indicate a tendency for the young men and young women in the sample to prefer different occupational roles and to major in different fields of study in college. Together, these differences account for about one-third to two-thirds of the gender gap in hourly earnings three years after college graduation. This indicates that omission of work preferences and college major leads to an overestimation of the degree of current labor market discrimination against young female college graduates.

In preparing for its ten-year AACSB review the Graduate School of Business Administration at Kent State University undertook this series of studies to evaluate the validity of both existing and proposed admission criteria as predictors of academic performance among students in its Master of Business Administration program. Results indicate that total GMAT score remains the most significant single criterion for admission. With the exception of minority applicants, there appears to be no significant difference in its value when the groupings are considered. The sex of an applicant does appear to be an important in the analysis of applicants. Whether this is due to motivation, preselection, or some other factor, women candidates on the average do better academically than their male peers. The limited sample size of the female group, however, indicates that further study in this area is necessary, both to verify our results and to establish causation. Previous undergraduate study and grade-point averages were reconfirmed as acceptable predictors of academic success. The study was unable to establish the importance of age in the evaluation process. In the final area of investigation, minority status, there appeared to be no significant relationship between minority status and graduate grade point average. In conclusion, it appears that standardized formula for predicting academic success are useful screening tools; however, they should not be relied on as the sole basis for evaluation. Individual evaluation of applicants, including personal interviews where possible (particularly of marginal applicants), is critically important to the success of the admissions process.


A major report, "Managers for the XXI Century: Their Education and Development," emanated from a landmark international conference in Paris in June 1980. In this article, the authors presented a personal interpretation of the ideas on management and education that emerged from the Paris meeting. The authors cataloged some trends and issues in management education and presented recommendations and conclusions about changes in the direction of management education for the future.


The study examines the relative importance of three job factors and three organizational factors in individual position choice decisions and employs a new methodology for determining such relative importance weights. In addition, the research examines two individual differences—growth need strength and amount of previous work
experience as potentially influencing the relative importance of job and organizational variables. Data were collected from 62 American and Canadian graduate management students. The results suggest that pay and fringe benefits are the most important factors in the position choice situation, followed by use of skills and abilities, responsibility and leadership, and autonomy and independence, with flexibility of working hours and types of services the organization provides the two least important factors. Growth need, strength, and amount of previous work experience are related to relative importance of job and organizational variables. The advantages and disadvantages of the new methodology are assessed.


This paper reports the results of a study undertaken to evaluate the validity of requirements for admission to Florida State University's Graduate Program in Management offered by its School of Business in the Cape Kennedy Area of Florida. A multiple regression study was made using as independent variables students' undergraduate grade point average (UGPA), Graduate Record Examination aptitude test score (GRE), and age (AGE) at time of admission. The dependent variable was graduate grade point average (GGPA). The study revealed a significant positive correlation between GRE and GGPA. The correlation between AGE and GGPA was also significant but was positive for values of AGE up to approximately 29 and negative thereafter, UGPA was not even marginally significant.


This report is the first of an annual series of national normative data reports on the characteristics of college students 2 and 4 years after entering college. The results indicate that the best predictor of college grades turns out to be high school grades. Freshman characteristics predicted the likelihood of the graduating from the first institution with modest accuracy. Retention was facilitated by living in a college residence hall. Students with good high school preparation in science and Asian ethnicity were negatively correlated with retention. Public colleges had the lowest retention rate. A major correlate of an institution's retention rate is its selectivity level. Thus, the group of institutions with the highest retention rate is the highly selective private colleges, whereas the lowest retention rates occur in the least selective public and private 4-year colleges.

Four dimensions of career exploration were related to career decision making and satisfaction with that decision. Mediating variables in the explanation-decision making process were examined. Participants in the study were 284 undergraduate junior and senior business students in a required business course at a southeastern state university. Responses to 15 current exploration items were factors analyzed using principal factor analysis. Participation in occupational exploration was found to be related to year in school, self-esteem, and age. Seeking information from family and friends was related to gender, previous part-time work experience and age. Self-exploration was related to year in school and the use of employment as an exploratory activity was related to previous full time work experience. Occupational exploration, self exploration, and employment accounted for significant portions of the variance in career decision making when controlling for background variables. The hypothesis that value clarity would explain variance in career decision making was not supported. Only self exploration explained a significant portion of the variance in satisfaction when controlling for background characteristics and even self exploration no longer explained a significant portion of variance in satisfaction when controlling for value clarity, career knowledge and expectations.


Measurements collected on Stanford MBA students while they were working on their MBAs were used to predict management success through 20 years of their careers. Management success was operationalized as compensation which was measured at the beginning of the post-MBA career and at 5, 10, 15, and 20 years after receiving the MBA. A measure of extroversion, the Admissions Test for Graduate Study in Business (ATG®) total score, and age at the beginning of the MBA program were found to be important predictors of compensation at 20 years, with the coefficient of the extroversion measure being positive and the coefficients of age and ATG®B total score being negative. The coefficient of the measure of extroversion remained fairly constant over time, but the coefficients of age and ATG®B score decreased over time. Some possible explanations of these results were offered.
Harrell, Thomas W. "MBAs, Twenty Years After." Research Paper No. 750, Graduate School of Business, Stanford University.

Participants of several MBA classes from Stanford University's Graduate School of Business were tracked for twenty years after graduation, thereby identifying trends as well as one-time results. Data describing their progress were correlated with personality characteristics and background obtained from them when they were students in the program. Results of the study may prove useful both to those influencing the direction of graduate programs and those benefitting from it, the candidates, and employers. Findings based on the data and on the correlations suggest that success in business depends a great deal on personality factors and interests of the candidates. Much less important for these high quality persons are differences in scholastic aptitudes as measured either by the admissions test or else by first year grades, although second year grades did correlate with success. Other findings support current practices but also indicate fruitful areas for reevaluation. They include the surprisingly high interest in owning and working in small business, the clear dominance of oral communications over written communications for managers, and the substantial importance of an outgoing personality to achieving success. By relating the output of the study to the goal of the Graduate School of Business sufficient new information was acquired suggesting possible broadening of some of the admission requirements and purposes of the school.


To predict earnings 5 and 10 years after graduation of MBAs, regression models were developed on a sample of 266 graduates and validated against a new set of 70. The predictors included personality tests administered shortly after entrance into the MBA program, age at graduation, business aptitude tests, grade point average, and earnings at graduation and 5 and 10 years after graduation. Separate analyses were run for predictors available (a) at entrance, (b) at graduation, and (c) 5 years after graduation. The cross-validated multiple correlations for predicting 10-year earnings were .38, .45, and .65, respectively. Significant predictor variables included Harrell's High Earner's Scale and second-year grade point average. Age at graduation was significant in predicting year but not 10-year earnings.

This study examines why managerial positions are chosen using an occupational choice model which includes both pecuniary and nonpecuniary aspects of an occupation. The dependent variable used in analysis is dichotomous: present in a managerial position or not present in a managerial position. The study distinguishes between the taste and income producing effects which these personal characteristics play in the choice of a managerial position relative to any other position. The study observes the impact of various measures of ability, education, preferences, socioeconomic status and expected income with respect to managerial occupational choice over time. The role of ability is not at all clear. Lower levels of educational attainment appear to be positively correlated with managerial choice while higher levels are not. Neither the role of educational attainment nor institutional quality appear to be large. Consequently, the influences of education and ability are not as well defined nor as large as the income determination literature suggests even though the influence of expected income is large. The role of preferences and socioeconomic status appears to supercede the influence of the former two factors in the choice of managerial positions.


The California Psychological Inventory (CPI) was administered to 123 non-minority male graduate students enrolled in a part-time MBA program, in order to assess patterns of sample-group personality scale similarity or dissimilarity with selected criterion groups. Personality comparisons were felt to offer implications of programmatic and vocational significance. Criterion groups selected were the CPI norm sample, two student samples, and two business samples. The MBA student sample displayed attributes broadly evocative of managerial success when compared with the large norm sample. Yet broad patterns of significant differences emerged when the MBA profile was compared with the profiles of the criterion groups. MBA student deficiencies include the attributes of responsibility, capacity for status, self-control, achievement via conformance, and intellectual efficiency. MBA student strengths include the attributes of dominance, self-acceptance, and psychological-mindedness. Questions are raised about the implicit assumptions of the nature of MBA students which direct curricular and educational practice. Implications for effective preparation for business careers through MBA programs are discussed.

As a possible improvement on absolute salary as a criterion, the authors computed the annual percentage growth of the salaries of 143 engineering graduates employed in industry. Although 1st-year salaries increased markedly from 1950 to 1955, and 1957 salaries varied with years of service, the growth rates were homogeneous. The rates for different professional groups were different. 1st-year salary and salary growth were unrelated. Growth was related to academic grades, but absolute salary unexpectedly had a stronger relationship. Salary growth has some useful properties, but it is not uniformly applicable.


Item analyses were used to develop 2 moderator variables which, on cross-validation, successfully identified managers who were over- and underpredicted by regression equations developed earlier. These moderator tests were used to identify and eliminate from the cross-validation sample 55 managers (25% of the total) classed as "unpredictable." The point-biserial correlation between predicted criterion status (above or below the criterion median) and actual criterion status for the remaining managers was .73 as compared with a point biserial correlation of only .65 for all managers in the sample. Moreover, the degree of overlap on the actual criterion scale between managers predicted to be "high" or "low" was reduced from 38% to 28% by using the 2 moderator tests. It is concluded that these results provide further confirming evidence of the usefulness of moderator variables for enhancing the magnitude of relationships in test validation and selection research.


This paper examined certain determinants of compensation for the highest paid chief executive of industrial corporations. Specifically, the role of experience, education, business background and related characteristics which might be considered by a corporate board of directors attempting to recruit and compensate a chief executive were examined. This analysis expanded previous investigations of the determinants of executive compensation by specifically investigating certain variables which are prominent in the screening and job-competition hypotheses of wage determination. Assuming sales and/or profits properly measure performance, the explanatory power of variables relating to individual characteristics should be significant only if there is
indeed a consideration of background characteristics independent of performance, in the recruiting and compensating of corporate executives. The empirical results tend to support the relevance of this extension. The significant influence of experience upon compensation levels is shown by the importance of the age variable. The indirect evidence drawn from the variable measuring years as chief executive suggests that specific "on-the-job" training as a chief executive commands a wage premium, independent of performance; but mobility at the lower ranks also has a positive effect on compensation, perhaps indicating the desirable trait of trainability. Tests of the value of formal education were somewhat limited by the nature of the study sample, but neither education past the baccalaureate degree nor prestigious degrees were indicated to be significantly related to compensation. Nor was any systematic relationship identified between occupational background and differences in remuneration among group studied. An alternative specification of the equation tested showed that growth rate of assets has explanatory power in determination of compensation for chief executives, indicating that the concept of performance is perhaps broader than has been defined in previous studies. The overall implication is that a number of considerations in addition to current performance as measured by sales and profits influence current compensation for top executives. Decision-making by corporate boards of directors in a world of imperfect information apparently involves extrapolation of historical measures of performance (such as growth of the firm), evaluation of relatively low-cost indicators of future performance (age and experience) and determination of necessary premiums to inhibit executive mobility to protect the firm's investment in specific training of chief executives.


This paper examined strategies that could be used by employers to increase the probability that good candidates for managerial positions accept offers. A decision-theoretic approach was used to outline these strategies, with the final product being a simple interactive computer program which can be used in time-sharing mode by a personnel decision maker. The program provides quick answers to subjective inputs given by the decision maker and allows the latter to explore the consequences of his assessment of the decision situation as well as different selection strategies.

This book examines the formation and dynamics of career aspirations and attainments of students. The data used in this study were obtained from students as well as their mothers. The size of the sample of respondents was large enough to allow examination of race-sex subgroups in the formation and attainment of status aspirations during the stage of the life course. The study used longitudinal data collected over 1969-1975. Using a sample of mother-child pairs, interviews dealing with various aspects of decision making were obtained from both the fifth or sixth grade student and parent. Six years later, these mother-child pairs were recontacted to obtain similar and new information on the topics. Results indicate that educational and occupational decisions change considerably over the student career. For some youth, these early aspirations elicit subsequently-developing and self-fulfilling parental expectations of them. These later parental expectations during high school are at a time in the life course when decisions play a greater role in determining actual attainments. Schooling and work aspirations are integrally related to a hypothetical system of socioeconomic background and socialization influences whereas other life plans are not due to social origins and the family socializing processes measured in this study. Some informative linkages between the formation of status aspirations and other life plans were also discovered. These planning dimensions perhaps develop in a systematized fashion. Educational and occupational aspirations become more predictable by the end of high school where background and family process factors account for up to 65 percent and 45 percent of the respective differences among teenagers. Race and sex effects are somewhat systematic in some aspects, yet not clearly interpretable in others. A critical trend is that race tends to influence schooling aspirations while sex obtains effects on occupational decisions. A clear set of sex-role influences is found in occupational "choice" sex-typing, beginning early in the life course and remaining for several years, and in the incidence, coincidence, and consequences of the early transition to adult roles. Race often serves to moderate these deficits associated with gender.


This book examines the historical development of the business school and details the criticisms of business education published in foundation reports in the late 1950s. These reports found business schools in general to be too vocational, of substandard quality regarding both students and faculty, and lacking in coherent and integrated programs at both the undergraduate and graduate levels. It then recounts the debate over the relative merits of a liberal v. vocational education and tracks the rise of the "new vocationalism" during the 1960s and 1970s and the concomitant increase in business school enrollment. Perceptions of the business school among academic and business administrators were measured in response to the increasing dissatisfaction of many
business leaders with the product of MBA programs and the saturation of the market by MBAs. Results indicate that there are significant variations in perceptions and expectations of business school deans and industry concerning the appropriate educational training and background for business careers. Industry is bemoaning the lack of generalist skills among new employees while it selects entry level job applicants largely on the basis of their technical specialization. This suggests that there is a need to increase technical competence within the various business technical functions.


The purpose of this study was to establish guidelines for improving the undergraduate business administration programs offered by colleges. The study focused on formulating such guidelines on the basis of both in-depth review of the literature and a study of responses to questionnaires by four concerned groups: students in undergraduate business administration programs, faculty members teaching courses in such programs, alumni of schools offering such programs, and the business community. Based on the results of the study, a number of guidelines were suggested: 1) more internship-cooperative programs, 2) downplay of theory and greater emphasis on practice, increased reliance on case studies, and more instruction and lecturers with knowledge of the business world, 3) greater emphasis on field experience, work-study, and on-the-job-experience, 4) more concern for student welfare and more effective counseling in career and course selection, 5) increased emphasis on communication and quantitative skills, 6) certificates of specialization in highly specific subject areas, 7) more courses in modern management theory, 8) more cross-cultural studies.


This paper examines the factors influencing the yield—the proportion of accepted applicants that confirm their intention to attend—in the admissions process for the MBA program of the school of management at a large metropolitan university. A stochastic model of a student's MBA program choice decision is presented. Using the resulting logistic probability model, the authors examine the impact of student traits (both aptitude-related and non-aptitude-related) and program characteristics, known to admissions officials, on the probability of confirmation. The results of the analysis provide a basis for measuring the dimensions of the market for educational services this MBA program provides, suggest a strategic response to this market, and offer a way to
measure the profitability of various strategic response options. In particular, the results demonstrate that financial aid awards can increase dramatically the probability of confirmation and that confirmation probabilities are affected significantly by non-aptitude-related student characteristics.


This paper was a case study in the development, implementation and evaluation of the delphi technique, which systematically makes use of expert judgment in generating manpower forecasts. The study was conducted in a large national retail organization on professional manpower. The results of the delphi technique were compared with results generated by conventional regression based models and the actual experience of the organization, which serves as the criterion. The study also analyzed the informational elements used by experts during the delphi procedures and developed a model based on these elements. The usefulness of the delphi in generating manpower forecasting models was also discussed. The greatest utility of the delphi procedure seemed to lie in hypothesis or model-generating powers. While models and hypotheses can be developed from several alternative sources, the delphi procedure does represent an established method of soliciting the decision processes and implicit models of experts, managers and administrators. Further, the information needs revealed by the process can provide a useful source of elements for a manpower information system necessary for effective manpower planning. Despite a number of shortcomings in the procedures, at the minimum, the delphi appears to be useful in generating preliminary insights into highly unstructured or underdeveloped subject areas such as manpower planning. Further, a carefully developed consensus of managers' opinions may be acceptable when direct empirical data are unreliable or unavailable.


This study examined the question of whether personnel and industrial relations managers are in fact managers in the same sense as other business managers, operating within the confines of management roles and committed to the pursuit of profit, growth, and productivity. The study attempted to answer this question by utilizing two measures which have been shown to have a consistent positive relationship to managerial success within administrative organizations. The two measures used were the Miner Sentence Completion Scale (MSCS) index of motivation to manage and the Ghiselli Self
Description Inventory index of managerial talent. Both the MSCS and Ghiselli measures yielded numerous significant relationships with success criteria, especially those of reaching top management, achieving a vice presidential title, earning a large income, and obtaining a high overall success score. That so many significant relationships did appear in the study provides convincing evidence of the applicability of the managerial model to the personnel and industrial relations occupations.


The study reviews the research that has used expectancy and decision models to examine occupational choice and to assess the usefulness of such approaches. The models employed are based on a rational maximization principle. This principle assumes that people will choose the occupations they believe will result in the greatest amount of benefit to them, provided there is a good chance they can actually attain a position in the occupation. The empirical results provide substantial support for the use of such models. The results of studies in occupational guidance and counselling are congruent with the foregoing. Providing people with accurate information about jobs and job outcomes facilitates adjustment and reduces turnover. Also, engaging people in a process whereby they explicitly list alternatives, the pros and cons of alternatives, and their importance, helps them to consider more alternatives, change their previous evaluations and reduce their regret (while increasing their commitment) about the choice they actually make. The author's conclude that the expectancy and expected value models provide solid, explicit ways in which people might use the information, their values, and their expectations about the future, in order to make the 'best' possible choices.


The study investigates the external validity of simulation games. A survey instrument was used to collect relevant career success data from 54 graduates of a business school of a large university five years after they participated in a general management game. Three responses were used as measures of the career success subjects had achieved since graduation: (1) number of promotions received earlier within the same organization or into another organization since graduation (2) number of organization levels that exist between the subjects' chief executive officers' and subjects' current positions; and (3) the percentage salary increase received since assuming the first position after graduation. Because of the potentially moderating effect of GPA and
because of the possible influence organization size might have on career success measures, these two variables were selected for further analysis. The results lend little support to the hypothesis that success in general management simulations is related to subsequent career success. The authors suggest that factors that contribute to success in general business simulation may be inappropriate in determining the career success of graduates five years after graduation. The two moderating variables analyzed (GPA and organizational size) appear to have influenced the results of the study. GPA seems to influence both game and career success and organizational size has an effect on two of the three career success measures. Persons in larger organizations reported fewer promotions and salary increases.


The effects of postdecisional justifications of job satisfaction and commitment of new employees were investigated. One hundred and eight M.B.A.'s were questioned about their job choice immediately after making the decision and then again six months later. Turnover data were collected after 24 months. Results showed that individuals who had made the original decision volitionally, that is, from among a number of offers and free from external constraints, and who had perceived the choice to be irrevocable were more satisfied and committed six months later than others. The perceived irrevocability of the choice and behavioral commitment were also negatively related to turnover after two years. Interaction effects between the sufficiency of the original justification and job alternatives was associated with diminished job satisfaction and commitment for insufficiently justified respondents. Overall, the results of this investigation are interpreted as consistent with the view that attitudes and commitment may be created retrospectively through processes of rationalization and justification.


This study compared the effects of MBA versus non-MBA training on job success, using groups matched for initial status on a number of other factors. The subjects were 41 white male managers who had obtained MBA degrees from a number of South African Universities and a comparable group of 41 white male managers who had not received any postgraduate management training. Results indicated that the initial mean salary of the MBA group did not differ significantly from that of the non-MBA group. However, after 5 years the mean salary of the MBA group was
significantly higher than that of the non-MBA group. Similarly, for level of position in their firms: there were no initial differences, but significant differences five years later in favor of the MBA group. However, there were no significant differences between the groups in job satisfaction, either initially or five years later. These findings suggest that obtaining a postgraduate degree in management is associated with greater success as a manager, as measured by salary earned and position attained five years after graduation, but that getting such a degree is not related to greater job satisfaction. The study does not explain the processes or mechanisms that are responsible for the positive results found in this investigation.


This book investigates how people enter into careers. It presents the design for a series of studies that map the sequences of jobs people hold over time, examines the individual factors that open and close doors to career possibilities, and explores the ways people manage their lives as they make the transition from adolescence to adulthood. The chief components of the design are the theoretical perspectives that inform the research program and the data bases on which the analyses are based.


Within a sample of 599 business students differences between 382 men and 217 women in personal values and company goal priorities were examined. Both groups exhibited value patterns comparable to those of managers in general although significant differences between the men and women were found; the men ranked Political and Theoretical values higher and Social, Aesthetic, and Religious values lower. A simulated managerial situation which required subjects to rank order the goals for a fictitious firm produced organizational goal rankings which for men and women were highest for organizational efficiency and profit maximization and lowest for social welfare. Women ranked Employees' Welfare higher and Organizational Growth lower than did the men. In general, the rankings of personal values were not significantly related to the priorities of organizational goals.

Results of a study undertaken to determine the predictive validity of admission variables used to screen applicants for graduate study in business at a medium sized university are reported. Stepwise linear regression analysis was utilized to identify the variables which explain significant amounts of variance in graduate grade point average (GGPA) – the criterion variable. The study revealed that the following variables explained slightly less than 21 percent of the total variance in GGPA: (1) junior/senior undergraduate grade point average (GPA), (2) Graduate Management Aptitude Test (GMAT) score, (3) full/part-time attendance in the graduate program, (4) number of credit hours required in the Master of Business Administration (MBA) program, (5) undergraduate major, (6) age and (7) pursuance of the MBA at the same institution where the student received the undergraduate degree. Junior, senior GPA, GMAT score, and full vs. part-time attendance in the MBA program were significant at the .01 level.


Gender differences in the personal values of business students (100 men, 49 women) and corporate recruiters (72 men, 30 women) were investigated using England's (1967) Personal Values Questionnaire. Multivariate analysis of variance indicated gender differences for the value items associated with business goals, groups of people, general topics, and personal characteristics. The results generally supported the differences in males' and females' value profiles although little evidence supported the hypothesis that greater gender differences would be found within the student sample than within the recruiter sample. The over-all gender differences in business goals and personal characteristics seem to be a result of differences between male and female students. The over-all gender differences for the category of organizational reference groups seem to be accounted for by differences between male and female recruiters. Therefore, while gender did seem to be important in explaining differences in values, part of the variance might be accounted for by organizational (life) experience or the effects of organizational socialization as represented in this study by "occupational" position. The authors speculate that as students enter the workforce, their values may change. This would account for the gender-related differences in values for the category business goals for students but not recruiters.

The college choice behavior of graduate business school applicants is studied. A stochastic utility model is proposed and estimated by use of a sample of students admitted to Carnegie-Mellon University. The specific formulation used is the conditional logit model. Results indicate that such factors as net cost, quality, and distance of applicant's home from school are important determinants of college choice. Specific probability computations are used to illustrate the results for a typical decision maker.


The present study was designed to ascertain similarities and differences in personality traits, values, and intellectual abilities between individuals preferring particular kinds of managerial positions. 97 graduate students enrolled in the Graduate School of Management at Vanderbilt expressed their preferences for 10 different organization or job categories: line vs. staff, large vs. small, ongoing operation vs. new venture, produce a product vs. provide a service, frequent vs. infrequent travel, continual meeting of people vs. working with a fixed set of individuals, group settings vs. one-on-one situations, close supervision vs. being left alone, an working with a large number of people vs. working intimately with a few vs. working alone. Psychological tests were used to compare individuals having preferences for different managerial positions.


This paper evaluates the effectiveness of five admission models in predicting student performance in a Masters of Business Administration program. These models include two sets of faculty involving undergraduate grade point and admission test scores, one set by the business schools' accrediting agency, a cross validated regression model, and a cross validated discriminant analysis model. Although the latter two yield better results than the former three, none substantially improve on the admission officer's judgment.

Multiple regression analysis is used to establish a scale, measuring involvement in campus activities, work experience, technical background, references, and goals. This scale is then tested to see whether it improves the prediction of success in school. For graduate business students, previous studies have shown a coefficient of determination .14 when both GMAT score and grade point average are used. Introduction of the scale raises the coefficient to .19 for the 1976-1977 graduate class. Appropriate predictive cross-validation techniques indicate that the regression is validated on data from the 1980-1981 academic year. Using standard statistical computer software, any school can choose variables, experimentally build a scale, and test its predictive value. This type of scale helps to integrate much of the miscellaneous information collected on the standard college and graduate school application.


A questionnaire measure of achievement motivation tested on college students in the Netherlands was administered to business college students, small business managers, and corporation managers. In addition, category scores were developed that reflect the more specific components of the n Ach (need for achievement) construct. Item analyses and Kuder-Richardson 20 estimates were adequate. Intercorrelations among the category scores were significantly lower for the student sample, which suggests the n Ach construct may be less differentiated among older managers. Managers differed significantly from business students on several components of n Ach.


This report uses NORC's longitudinal study of 1961 male college graduates to examine careers in business and attendance of graduate business schools. This somewhat dated study examines the contributing factors to the initial choice of a business career by freshman in college as well as by those who made the initial choice as seniors. This study also examines the image of business held by seniors. Results indicated that men planning on business careers did less well in college and that father's occupation was best predictor of interest in business. The idea that businesses can't compete with the old line professions in obtaining the most talented college graduates is borne out by this study. In the entire sample, graduate school attendance was most strongly correlated with sex, career plans, and academic performance. The academic performance index was the best indication of likelihood of undertaking graduate study in business. A higher degree in business was associated with a more favorable job outlook. Men with
advanced business degrees made more money than those without them and they were happier with their salaries and opportunities for advancement. The higher salaries for men with business degrees were not a statistical artifact. In a set that included nine other independent variables, holding a business degree was the most important predictor of a high monthly salary.


Two admissions models are developed to predict future academic performance of graduate management students. The first model is based on 40 students who were admitted and enrolled in the program and is uncorrected for curtailment. The second model is developed from the total applicant population of 222 students after curtailment correction. The corrected model demonstrates higher predictive validity than the uncorrected model for two future classes of students. Furthermore, different predictors enter each model, affecting the beta weights, validities of predictors, and the total amount of variance explained by the models. A factor analysis and an analysis of admissions decisions offer additional support for the curtailment-corrected model in selecting students with high academic potential.


Annual compensation of 136 alumni of a graduate management program was predicted by using years of work experience, graduate grades and data obtained prior to graduate school admission. Step-wise multiple regression analyses revealed that work experience was more predictive of staff than line compensation. After adjusting for the effect of work experience, graduate grades were significantly correlated to both line and staff earnings though the incremental predictive validity was much higher for line managers. Several pregraduate academic and nonacademic variables were also significant predictors. The results support the ability to predict managerial compensation prior to career and graduate school entry.

This paper examined the link between personal attributes and the probability of promotion. Results indicated that the rate of promotion increased with college selectivity, college GPA, and rank in graduate school. It is positively related to leadership ability and negatively related to an individual’s desire for job security—or aversion. Personal characteristics, such as imaginative thinking and initiative, were also positively related to rate of promotion, while socioeconomic background is not significant when other variables, namely college selectivity, were controlled for.


This study is a comprehensive review by Stephen Withey and his colleagues of earlier research on the measurable changes and benefits that result from going to college. They conclude that not only does going to college yield benefits, but every added year of postsecondary education yields additional impact and benefits. Those who embark on careers outside the home have better opportunities, more job satisfaction, and better working conditions. The authors examine the effects of higher education on economic changes, lifestyles, use of mass media, and political behavior. The collection of data for effective measurement of impact is still incomplete and these methods need further refinement. Withey et al discovered that individuals who go to college tend to be more liberal and tolerant in their attitudes toward and in their relations with other individuals and groups in society, more satisfied with jobs, more highly paid and less subject to unemployment, more thoughtful and deliberate in their consumer expenditures, more likely to vote and to participate in community activities, and are more informed about community, national, and world affairs. Women who go to college are more likely to work and to have fewer children on average. On the negative side, college attendance tends to prolong youth, contribute to the generational conflict, cause conflict with the younger generation between those who go to college and those who don't and causes conflict between "liberals" and "conservatives on social issues. Politically, college graduates tend to vote Republican more than nongraduates and to be more "liberal."
III. MBA NEW MATRICULANTS SURVEY QUESTIONNAIRE
MBA NEW MATRICULANTS SURVEY

Sponsored by the Graduate Management Admission Council
An Association of Graduate Schools of Management

Designed by NORC
A Social Science Research Center
at The University of Chicago

October, 1985
WHAT THIS SURVEY IS ABOUT

Less is known about students in management master’s degree programs than about students in any other professional degree program in the United States. This information shortage inhibits planning by schools, frustrates potential students who wish to learn more about graduate management education, and makes it difficult for businesses, government agencies, and other organizations to meet the needs of graduate management schools and students. In order to help change this situation, the Graduate Management Admission Council has commissioned NORC to conduct a study of newly enrolled students in U.S. business and management master’s degree programs. The survey will be used to make statistical information about MBA student* widely available. We want to build a profile of the MBA student’s background, expectations, and reasons for choosing management as a career.

Only graduate management students, like you, can provide the information we need. The more completely you answer this survey, the more accurate our profile will be. Answers to all questions are voluntary. The information you provide will be kept strictly confidential. Only statistical summaries will be prepared. Any information that might identify you personally will never be seen by anyone outside of NORC’s research staff.

NORC has carefully tested this survey so that it should take you about one hour to complete. In appreciation of your participation we will pay you $12.00 when we receive your completed questionnaire. Thank you very much.

WHEN YOU HAVE FINISHED, PLEASE PUT YOUR SURVEY IN THE STAMPED PRE-ADDRESSED ENVELOPE AND MAIL IT.
BEFORE YOU START, PLEASE READ THIS:

Instructions are printed in bold for each question. Here are some examples of the different kinds of instructions you will see and the correct way to indicate your answer for each kind of question.

EXAMPLE A: Only one choice is correct.

QUESTION: Sex. CIRCLE ONLY ONE.

ANSWER: "I am female."

FILL IT OUT THIS WAY:

Male .......................................................... .......................... .......................... .......................... .......................... 1
Female .......................................................... .......................... .......................... .......................... .......................... 2

EXAMPLE B: More than one choice applies.

QUESTION: Is/was any part of your annual compensation based on a piece-rate, commission, or bonus. CIRCLE ALL THAT APPLY.

ANSWER: "I received commission and bonus."

FILL IT OUT THIS WAY:

a. Piece rate ................................................................. .............................................. .......................... 1
b. Commission ............................................................... .............................................. .......................... 2
  Bonus ................................................................. .............................................. .......................... 3

c. A defined benefit pension program ................................................................. .............................................. .......................... 4

EXAMPLE C: Filling out a scale.

QUESTION: Here is a list of fringe benefits. We'd like to know how important you consider each one to be in choosing employment after graduation. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

ANSWER: "Medical insurance is extremely important. Any retirement program is somewhat important. A defined-benefit pension program is very important."

FILL IT OUT THIS WAY:

1 Extremely Important
2 Very Important
3 Somewhat Important
4 Not Too Important

a. Medical, surgical, or hospital insurance ................................................................. .............................................. .......................... 2
b. Any retirement program ................................................................. .............................................. .......................... 3
  A defined benefit pension program ................................................................. .............................................. .......................... 4
EXAMPLE D: Filling in a dollar amount.

QUESTION: What were your annual earnings before taxes (including salary, bonuses, and commissions)? WRITE IN DOLLAR AMOUNT AND INDICATE THE RATE AT WHICH YOU WERE PAID.

ANSWER: "My annual salary was $25,000 before taxes."

CORRECT: $125,000
Dollars
Cents

per Hour...1 Week...2 Month...3 Year...4

INCORRECT: $12,500
Dollars
Cents

per Hour...1 Week...2 Month...3 Year...4

EXAMPLE E: Filling in a date.

QUESTION: When do you plan to start looking for this position? WRITE IN MONTH AND YEAR.

ANSWER: "I plan to start looking in January, 1987."

CORRECT: 01 87
Month
Year

INCORRECT: 01 87
Month
Year

INCORRECT: 01 87
Month
Year

EXAMPLE F: Filling in a written answer.

QUESTION: In what country were you born? WRITE IN NAME.

ANSWER: "I was born in the United States."

FILL IT OUT THIS WAY: (Please disregard the small boxes.)

United States

Name of country

Some questions have the instruction: PLEASE SKIP TO QUESTION ... after some of the answers. Please do not skip any questions unless specifically asked to do so.

Many questions also have small boxes (like __________) and instructions for use by the NORC survey staff. Please disregard these small boxes and instructions when completing the survey.

NORC PN:4426
PLEASE CONTINUE ON THE NEXT PAGE.
EDUCATIONAL HISTORY

In this section we want to find out about your educational background and the kind of choices that led to your enrollment in this MBA (or equivalent) program.

1. Why did you decide to pursue a graduate management degree (MBA or its equivalent)? WRITE IN AS MANY REASONS AS APPLY.

2. What is the name of the graduate management school in which you are currently enrolled? WRITE IN COMPLETE NAME.

3. Where is this school located? WRITE IN CITY AND STATE.

4. Why did you decide to apply to this particular school? WRITE IN AS MANY REASONS AS APPLY.

5. Why did you decide to enroll at this particular school? WRITE IN AS MANY REASONS AS APPLY.

6. When did you take your first course in the graduate management program in this school? WRITE IN MONTH AND YEAR.

     Month     Year
7. Are you enrolled as a full-time or part-time student? CIRCLE ONLY ONE.
   Full-time .................................................. 1
   Part-time .................................................. 2
   Other, please specify ........................................... 5

8. When do you expect to graduate from the graduate management program at this school? WRITE IN MONTH AND YEAR.
   ______/______ Year

9. What is the exact name of the graduate management degree you are pursuing? WRITE IN COMPLETE NAME OF DEGREE.

10. Are you enrolled in a joint degree program? CIRCLE ONLY ONE.
     I am not in a joint degree program ........................................... 00
     MBA (or equivalent) joint with
        any Bachelor's degree .......................................... 10
        Doctor of Business Administration ................................ 11
        Doctor of Medicine ................................................. 12
        Doctor of Medicine in Dentistry .................................. 13
        Doctor of Philosophy ............................................... 14
        Juris Doctor .................................................................. 15
        Master of Architecture .............................................. 16
        Master of Arts (any field) .......................................... 17
        Master of Engineering ............................................... 18
        Master of Public Health .............................................. 19
        Master of Public Management .................................... 20
        Master of Science (any field) .................................... 21
        Master of Social Work ................................................... 22
        Master of Urban Planning ........................................... 23
     Other, please specify .................................................. 50

MBA NEW MATRICULANTS SURVEY
11. What area of concentration or field of specialization have you chosen within the MBA program in which you are enrolled? CIRCLE ALL THAT APPLY OR CHECK APPROPRIATE BOX.

- I do not plan to specialize
- I have not decided on a specialization

- a. Accounting
- b. Arts Administration
- c. Behavioral Sciences
- d. Business Economics/Economics
- e. Decision Sciences
- f. Finance
- g. Health Services Administration
- h. Hotel and Restaurant Administration
- i. Human Resource Management
- j. Industrial/Labor Relations
- k. Insurance
- l. International Business
- m. Management Information Systems
- n. Management, General
- o. Marketing
- p. Nonprofit Management
- q. Operations Research
- r. Organizational Behavior
- s. Personnel Management
- t. Production Management
- u. Public Policy or Administration
- v. Quantitative Analysis
- w. Real Estate
- x. Statistics
- y. Transportation
- z. Urban/Land Economics
- aa. Other, please specify.

Office use only.

12. Looking at the year from September 1, 1985 to August 31, 1986, please use this list of expenses associated with attending business school to indicate estimated annual expenses in each category. Include expenses which will be paid by scholarship, loan, tuition reimbursement, or any other sources. WRITE IN AMOUNTS IN DOLLARS OR CHECK "DOES NOT APPLY" IF THE COST IS NOT INCURRED.

<table>
<thead>
<tr>
<th>Does Not Apply</th>
<th>Annual Amount in Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Tuition and regular fees</td>
<td>$</td>
</tr>
<tr>
<td>b. Books</td>
<td>$</td>
</tr>
<tr>
<td>c. Transportation to classes</td>
<td>$</td>
</tr>
<tr>
<td>d. Room and board</td>
<td>$</td>
</tr>
<tr>
<td>e. Other, please specify.</td>
<td>$</td>
</tr>
</tbody>
</table>
13 How many courses are covered by the expenses listed in the previous question? WRITE IN NUMBER OF COURSES.

Number of courses

14 How many courses, in total, are required for the MBA degree? WRITE IN NUMBER OF COURSES.

Number of courses

15 Looking again at the year from September 1, 1985 to August 31, 1986, do you expect to receive funds from any of the following sources? WRITE IN AMOUNTS IN DOLLARS OR CHECK "DOES NOT APPLY" IF YOU GET NO FUNDS FROM THAT PARTICULAR SOURCE.

<table>
<thead>
<tr>
<th>Loans</th>
<th>Does Not</th>
<th>Annual Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. College or university loan</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>b. Federal Guaranteed Student Loan</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>c. Federal Insured Student Loan</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>d. National Direct Student Loan</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>e. Parents, relatives, or friends</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>f. Regular bank loan</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>g. State student loan</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>h. Other loan, specify</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scholarships</th>
<th>Does Not</th>
<th>Annual Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. College or university</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>j. Other scholarship, specify</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>Does Not</th>
<th>Annual Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>k. Work/study program</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>l. Employer tuition reimbursement</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>m. Employer pay for school time</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>n. Your parents (not a loan)</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>o. Other, specify</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

Office use only

16 Do you currently receive any type of support for your MBA program from your employer? CIRCLE ONLY ONE.

Yes

No PLEASE SKIP TO QUESTION 19

Not currently employed PLEASE SKIP TO QUESTION 19

MBA NEW MATRICULANTS SURVEY
17. What type of support is that? **CIRCLE ALL THAT APPLY.**
   a. Full time off from work responsibilities with full pay
   b. Part time off from work responsibilities with full pay
   c. Full time off from work responsibilities with partial pay
   d. Part time off from work responsibilities with partial pay
   e. Alternating work-study program with no pay during study
   f. Full tuition reimbursement with no limitations or obligations
   g. Full tuition reimbursement with limitations or obligations
   h. Partial tuition reimbursement with no limitations or obligations
   i. Partial tuition reimbursement with limitations or obligations
   j. Employer loans tuition funds but may cancel loan
   k. Employer continues benefits but not pay while you study
   l. Other, please specify

**Office use only**

18. If this support from your employer involves limitations or obligations, please describe them here. **WRITE IN LIMITATIONS OR OBLIGATIONS.**

19. In the last three years did you apply to any graduate management schools in addition to the one you are currently attending? **CIRCLE ONLY ONE.**
   Yes
   No

20. How many **additional** schools did you apply to? **WRITE IN EXACT NUMBER.**

21. In the last three years were you admitted to any graduate management schools in addition to the one you are currently attending? **CIRCLE ONLY ONE.**
   Yes
   No

22. How many **additional** schools were you admitted to? **WRITE IN NUMBER.**

23. What is the name of the graduate management school to which you were admitted that was your second choice? **WRITE IN EXACT NAME.**

Name of school

NORC PN 4426
24 Where is this school located? WRITE IN CITY AND STATE OR FOREIGN COUNTRY.

City

State or foreign country

25 Why did you decide to apply to this particular school? WRITE IN AS MANY REASONS AS APPLY.

26 Why did you decide not to enroll at this particular school? WRITE IN AS MANY REASONS AS APPLY.

27 Do you have any other graduate education in business or any other field? CIRCLE ONLY ONE.

Yes

No ... PLEASE SKIP TO QUESTION 29

MBA NEW MATRICULANTS SURVEY
28 OTHER GRADUATE EDUCATION. List all other graduate schools you have attended. WRITE IN SCHOOL NAME, STARTING DATE, ENDING DATE, CITY, STATE OR FOREIGN COUNTRY, MAJOR FIELD, AND DEGREE AWARDED. PLEASE DO NOT ABBREVIATE.

a School Name

City

Major Field

Degree Awarded

Office use only FICE l l l l FIPS l l l l l STA l l l l l l l MAJ l l l l DEG l l l l l

b School Name

City

Major Field

Degree Awarded

Office use only FICE l l l l FIPS l l l l l STA l l l l l l l MAJ l l l l DEG l l l l l

c School Name

City

Major Field

Degree Awarded

Office use only FICE l l l l FIPS l l l l l STA l l l l l l l MAJ l l l l DEG l l l l l

29 Which graduate admission tests have you ever taken? CIRCLE ALL THAT APPLY OR CHECK APPROPRIATE BOX.

I have not taken any tests

a Dental Admission Test (DAT)

b Graduate Management Admission Test (GMAT or ATGSB)

c Graduate Record Examination (GRE)

d Law School Admission Test (LSAT)

e Medical College Admission Test (MCAT)

f National Teacher Examination (NTE)

g Ophthalmological College Admission Test (OCAT)

h Pharmacological Colleges Admission Test (PCAT)

i Veterinary Admission Test (VAT)

j Other, please specify

Office use only
30 Indicate to which of the following graduate programs you have ever been admitted. CIRCLE ALL THAT APPLY OR CHECK APPROPRIATE BOX.

a. Dental school
b. Law school
< Medical school
d. Any other master's degree (not MBA)
e. Any other doctoral degree (not Dentistry, Law or Medicine)

I have never been admitted to any of these graduate programs.

31 UNDERGRADUATE EDUCATION: List all undergraduate schools you have attended. WRITE IN SCHOOL NAME, STARTING DATE, ENDING DATE, CITY, STATE OR FOREIGN COUNTRY, MAJOR FIELD, AND DEGREE AWARDED. PLEASE DO NOT ABBREVIATE.

a. School Name ____________________________
   City ____________________________
   Major Field ____________________________
   Degree Awarded ____________________________

b. School Name ____________________________
   City ____________________________
   Major Field ____________________________
   Degree Awarded ____________________________

MBA NEW MATRICULANTS SURVEY
EMPLOYMENT HISTORY

32. Indicate the choice from the list below which best describes your current employment situation. CIRCLE ONLY ONE.

Employed full-time (35 or more hours a week) ... SKIP TO QUESTION 34 ... 1
Employed part-time (less than 35 hours a week) ... 2
Not employed or seeking work ... 3
Not employed but seeking full-time work ... 4
Not employed but seeking part-time work ... 5

33. Have you ever worked full-time since graduating from college? CIRCLE ONLY ONE.

Yes ... 1
No ... PLEASE SKIP TO QUESTION 88 IN THE NEXT SECTION ON PAGE 25 ... 2

34. How many months have you worked full-time since graduating from college? WRITE IN NUMBER OF MONTHS.

| ... | Months |

35. For how many different employers have you worked full-time since graduating from college? WRITE IN NUMBER OF EMPLOYERS.

| ... | Number of employers |

Questions 36 through 39 deal with your current or most recent employer.

36. When did you start working for your current/most recent employer? WRITE IN MONTH AND YEAR.

| ... | Month | ... | Year |

37. What were your earnings before taxes (including salary, bonuses, and commissions) when you started working for this employer? WRITE IN DOLLAR AMOUNT AND INDICATE THE RATE AT WHICH YOU WERE PAID.

$ ... | Dollars | Cents

per Hour ... 1 Week ... 2 Month ... 3 Year ... 4

38. Do you still work for this employer? CIRCLE ONLY ONE.

Yes ... PLEASE SKIP TO QUESTION 40 ... 1
No ... 2

39. When did you stop working for this employer? WRITE IN MONTH AND YEAR.

| ... | Month | ... | Year |

NORC PN 4428
40 What is the name of the parent organization you work/worked for? For example, AT&T is the parent organization of AT&T Communications, General Motors is the parent organization of General Motors Acceptance Corporation; the U.S. Federal Government is the parent organization of the Army and every other branch of the federal government such as the Internal Revenue Service. WRITE IN NAME.

Name of organization

41 What is the division or subsidiary within this parent organization that you work/worked for? For example, Fisher-Price is a subsidiary of the Quaker Oats Company, Haagen-Dazs is a subsidiary of Pillsbury, Inc.; the Treasury Department is a division of the U.S. Federal Government. WRITE IN NAME.

Name of division/subsidiary

42 What kind of business or industry is/was this? Describe the subsidiary or division you work for. If you don't work for a subsidiary or division describe the business of the parent organization. WRITE IN BRIEF DESCRIPTION.


43 What form of legal organization is/was this employer? CIRCLE ONLY ONE.

Publicly held corporation ................................................................. 01
Privately held corporation ............................................................... 02
General partnership ........................................................................... 03
Limited partnership ............................................................................ 04
Sole proprietorship (you are not the owner) ....................................... 05
Sole proprietorship (you are the sole owner) ...................................... 06
Private nonprofit organization .......................................................... 07
Local governmental organization ....................................................... 08
State government ................................................................................ 09
Federal government (nonmilitary) ....................................................... 10
Military ............................................................................................... 11
Other, please specify ........................................................................... 50

Don't know ....................................................................................... 98

44 What is the exact location of the establishment where you work/worked? WRITE IN CITY AND STATE OR FOREIGN COUNTRY.

City...................................................................................................... 1

State or foreign country................................................................. 3
45 What is was the title or name of your current final position with this employer? WRITE IN EXACT TITLE.

Title

46 What kind of work were you doing in that position? WRITE IN A BRIEF DESCRIPTION OF YOUR PRIMARY DUTIES.


47 How many hours do you usually work each week for this employer? WRITE IN NUMBER OF HOURS.

Hours

48 Does your answer to the previous question include any hours of paid release time to attend school? CIRCLE ONLY ONE.

Yes 1
No 2

49 How many hours of release time? WRITE IN HOURS OF RELEASE TIME.

Hours

50 What are/were your current/final earnings before taxes (including salary, bonuses, and commissions)? WRITE IN DOLLAR AMOUNT AND INDICATE THE RATE AT WHICH YOU WERE PAID.

Dollars Cents

per Hour...1 Week...2 Month...3 Year...4

51 What are the sources of your current/final earnings from this employment? WRITE IN DOLLAR AMOUNTS ON AN ANNUAL BASIS. USE ALL CATEGORIES THAT APPLY.

Dollars per Year

a. Salary
b. Hourly pay
c. Overtime pay
d. Bonuses
e. Commissions
f. Other, please specify

Office use only
52 Indicate which of the following fringe benefits you receive in this employment. CIRCLE ALL THAT APPLY OR CHECK APPROPRIATE BOX.

I receive no fringe benefits

- Stock options or other securities
- Defined-benefit pension
- Defined-contribution pension
- Health care or health insurance
- Life insurance
- Disability insurance
- Other insurance
- Company provided transportation
- Tuition reimbursement
- Housing
- Other, please specify

Office use only

53 How many promotions have you received/did you receive from this employer? Consider as a promotion any change in position which involved either an increase in earnings, or a substantial increase in responsibilities. WRITE IN NUMBER OF PROMOTIONS.

Promotions

54 Was any part of your annual earnings explicitly based on some formula related to your output or performance (e.g. piece rate, commissions, bonus, stock options)? CIRCLE ALL THAT APPLY OR CHECK APPROPRIATE BOX.

I am not compensated on an output/performance basis. PLEASE SKIP TO QUESTION 56.

- Piece rate
- Commission
- Bonus
- Stock Options
- Other, please specify

Office use only

55 What percent of your annual compensation is/was based on these output or performance measures? CIRCLE ONLY ONE.

- 10% or less
- 11-20%
- 21-30%
- 31-40%
- 41-50%
- 51-60%
- 61-70%
- 71-80%
- 81-90%
- 91% or more
- Don't know

MBA NEW MATRICULANTS SURVEY
### How many weeks a year of paid vacation do did you receive? CIRCLE ONLY ONE

<table>
<thead>
<tr>
<th>Option</th>
<th>Circle Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>One week or less</td>
<td>1</td>
</tr>
<tr>
<td>Two weeks</td>
<td>2</td>
</tr>
<tr>
<td>Three weeks</td>
<td>3</td>
</tr>
<tr>
<td>Four weeks</td>
<td>4</td>
</tr>
<tr>
<td>More than four weeks</td>
<td>5</td>
</tr>
<tr>
<td>None</td>
<td>6</td>
</tr>
<tr>
<td>Don't know</td>
<td>8</td>
</tr>
</tbody>
</table>

### On average, about how many people are were employed full-time by the employer at all locations during the period of your employment? CIRCLE ONLY ONE

<table>
<thead>
<tr>
<th>Option</th>
<th>Circle Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25</td>
<td>01</td>
</tr>
<tr>
<td>25-100</td>
<td>02</td>
</tr>
<tr>
<td>101-250</td>
<td>03</td>
</tr>
<tr>
<td>251-500</td>
<td>04</td>
</tr>
<tr>
<td>501-1,000</td>
<td>05</td>
</tr>
<tr>
<td>1,001-2,000</td>
<td>06</td>
</tr>
<tr>
<td>2,001-5,000</td>
<td>07</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>08</td>
</tr>
<tr>
<td>10,001-50,000</td>
<td>09</td>
</tr>
<tr>
<td>More than 50,000</td>
<td>10</td>
</tr>
<tr>
<td>Don't know</td>
<td>98</td>
</tr>
</tbody>
</table>

### On average, how many people are were employed full-time at the establishment where you work worked during the period of your employment? CIRCLE ONLY ONE.

<table>
<thead>
<tr>
<th>Option</th>
<th>Circle Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25</td>
<td>01</td>
</tr>
<tr>
<td>25-100</td>
<td>02</td>
</tr>
<tr>
<td>101-250</td>
<td>03</td>
</tr>
<tr>
<td>251-500</td>
<td>04</td>
</tr>
<tr>
<td>501-1,000</td>
<td>05</td>
</tr>
<tr>
<td>1,001-2,000</td>
<td>06</td>
</tr>
<tr>
<td>2,001-5,000</td>
<td>07</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>08</td>
</tr>
<tr>
<td>10,001-50,000</td>
<td>09</td>
</tr>
<tr>
<td>More than 50,000</td>
<td>10</td>
</tr>
<tr>
<td>Don't know</td>
<td>98</td>
</tr>
</tbody>
</table>
For your current most recent employment list, in descending order, the levels of supervision above your position. For example, if you are currently a regional product manager, the list might be: a President and CEO, b. Executive Vice-President, c. Vice-President of Marketing, d. Assistant Vice-President of Marketing, Midwest region, e. Marketing manager, Midwest region, YOUR POSITION (regional product manager). WRITE IN TITLE OR POSITION IN DESCENDING ORDER. OR CHECK APPROPRIATE BOX BELOW.

<table>
<thead>
<tr>
<th>Title or Position</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Highest position (CEO)</td>
<td></td>
</tr>
<tr>
<td>b) Next highest</td>
<td></td>
</tr>
<tr>
<td>c) Next highest</td>
<td></td>
</tr>
<tr>
<td>d) Next highest</td>
<td></td>
</tr>
<tr>
<td>e) Next highest</td>
<td></td>
</tr>
<tr>
<td>f) Next highest</td>
<td></td>
</tr>
<tr>
<td>g) Next highest</td>
<td></td>
</tr>
<tr>
<td>h) Next highest</td>
<td></td>
</tr>
<tr>
<td>i) Next highest</td>
<td></td>
</tr>
<tr>
<td>j) Next highest</td>
<td></td>
</tr>
<tr>
<td>k) Next highest</td>
<td></td>
</tr>
<tr>
<td>l) Next highest</td>
<td></td>
</tr>
<tr>
<td>m) Next highest</td>
<td></td>
</tr>
<tr>
<td>n) Next highest</td>
<td></td>
</tr>
</tbody>
</table>

YOUR POSITION IS HERE

1. There are no positions above my own

2. Don't know

60. What percent of the employees at your establishment held positions higher than yours? CIRCLE ONLY ONE.

- 10% or less: 01
- 11-20%: 02
- 21-30%: 03
- 31-40%: 04
- 41-50%: 05
- 51-60%: 06
- 61% or more: 07
- Don't know: 08

61. How many levels of positions are there at your establishment which are below the one you hold? CIRCLE ONLY ONE.

- One: 1
- Two: 2
- Three: 3
- Four: 4
- Five or more: 5
- None: 6
- Don't know: 3

MBA NEW MATRICULANTS SURVEY
62. What percent of the employees at your establishment hold positions lower than yours? CIRCLE ONLY ONE.

- 10% or less ................................................. [ 01 ]
- 11-20% .......................................................... [ 02 ]
- 21-30% .......................................................... [ 03 ]
- 31-40% .......................................................... [ 04 ]
- 41-50% .......................................................... [ 05 ]
- 51-60% .......................................................... [ 06 ]
- 61% or more .................................................... [ 07 ]

Don't know .................................................................... [ 98 ]

63. How many persons do/did you directly supervise? CIRCLE ONLY ONE.

- None .................................................................. [ 01 ]
- 1-3 .................................................................. [ 02 ]
- 4-6 .................................................................. [ 03 ]
- 7-9 .................................................................. [ 04 ]
- 10-12 ............................................................... [ 05 ]
- 13-15 ............................................................... [ 06 ]
- More than 15 .................................................... [ 07 ]

Don't know .................................................................... [ 98 ]

64. What is the total annual budget over which you have/had primary managerial responsibility? WRITE IN AMOUNT IN DOLLARS OR CHECK APPROPRIATE BOX.

- I am/was not primarily responsible for any budget .................................................. [ ]

$_________ ____________________________

Dollars

Don't know .................................................................... [ ]

65. What is the largest expenditure that you can/could approve without the consent of your supervisor? WRITE IN AMOUNT IN DOLLARS OR CHECK APPROPRIATE BOX.

- I am/was not authorized to approve any expenditure ........................................ [ ]

$_________ ____________________________

Dollars

Don't know .................................................................... [ ]
What are were the total annual revenues of the parent organization you listed as your most recent employer? WRITE IN AMOUNT IN MILLIONS OF DOLLARS OR CHECK APPROPRIATE BOX.

Less than one million dollars
Organization has had no revenue

Million Dollars

Don't know

Have you participated in any employer-provided training programs other than tuition reimbursement plans? CIRCLE ONLY ONE.

Yes
No

Have you finished any of these training programs? CIRCLE ONLY ONE.

Finished all the programs in which I participated
Finished some of the programs in which I participated, but not others
Have not yet finished, still participating
Stopped participating in the programs before finishing

Give the total number of months required to complete the programs in which you participated or are now participating. WRITE IN NUMBER OF MONTHS OR CHECK APPROPRIATE BOX.

Months

Don't know

During the time you participate/participated in these training programs, what percentage of your working time is/was devoted to the training? CIRCLE ONLY ONE.

None
Less than 25%
25-50%
51-75%
76-100%

Don't know

Do/did you actually use this training at work? CIRCLE ONLY ONE.

Often
Sometimes
Rarely
Never
22 Indicate the license requirements for your position. CIRCLE ONLY ONE.

There are were no license requirements... PLEASE SKIP TO QUESTION 74...01

Actuarial Certification ............................... 02
Bar Certification ...................................... 03
Certified Public Accountant ......................... 04
Dental Society Certification .......................... 05
Engineering Society Certification .................. 06
Medical Society Certification ....................... 07
Psychological Certification .......................... 08
Other, please specify .................................. 50

Don't know .............................................. 98

73 Do did you have the required certification? CIRCLE ONLY ONE.

Yes ....................................................... 1
No ......................................................... 2

Don't know .............................................. 8
Here are some items that describe different aspects of a person's employment or position. We would like to know how true you feel each item is of your current or most recent employer.

CIRCLE ONE RESPONSE PER ITEM ACCORDING TO THE FOLLOWING SCALE:

1. Very True
2. Somewhat True
3. Not Very True
4. Not At All True

a. The people I work with are helpful to me in getting my job done........ 1 2 3 4
b. The people I work with are competent in doing their jobs........ 1 2 3 4
c. The people I work with are friendly........ 1 2 3 4
d. I am given a lot of chances to make friends........ 1 2 3 4
e. The chances for promotion are good........ 1 2 3 4
f. The people I work with are friendly and helpful........ 1 2 3 4
g. I have an opportunity to develop my own special abilities........ 1 2 3 4
h. Travel to and from work is convenient........ 1 2 3 4
i. I receive enough help and equipment to get the job done........ 1 2 3 4
j. I am not asked to do excessive amounts of work........ 1 2 3 4
k. The work is interesting........ 1 2 3 4
l. I have enough information to get the job done........ 1 2 3 4
m. The pay is good........ 1 2 3 4
n. I am given a lot of freedom to decide how I do my own work........ 1 2 3 4
o. I am given a chance to do the things I do best........ 1 2 3 4
p. The job security is good........ 1 2 3 4
q. The problems I am expected to solve are hard enough........ 1 2 3 4
r. My supervisor is competent in doing (his/her) job........ 1 2 3 4
s. My responsibilities are clearly defined........ 1 2 3 4
t. I have enough authority to do my job........ 1 2 3 4
u. My fringe benefits are good........ 1 2 3 4
v. The physical surroundings are pleasant........ 1 2 3 4
w. I can see the results of my work........ 1 2 3 4
x. I can forget about my personal problems........ 1 2 3 4
y. I have enough time to get the job done........ 1 2 3 4
z. My supervisor is concerned about the welfare of those supervised........ 1 2 3 4
aa. I am free from the conflicting demands that others make of me........ 1 2 3 4
ab. The hours are good........ 1 2 3 4
ac. My supervisor is successful in getting people to work together........ 1 2 3 4
ad. Promotions are handled fairly........ 1 2 3 4
ae. The people I work with take a personal interest in me........ 1 2 3 4
af. Employer is concerned about giving everyone a chance to get ahead........ 1 2 3 4
ag. My supervisor is friendly........ 1 2 3 4
an. My supervisor is helpful to me in getting my job done........ 1 2 3 4

75 Is this employer the only one you have had since graduating from college? CIRCLE ONLY ONE.

Yes ... PLEASE SKIP TO QUESTION 88 IN THE NEXT SECTION ON PAGE 25.

No ................................................................. 2
Questions 6 to 8 deal with your first employer after graduating from college.

6. When did you start working for your first employer after graduating from college? WRITE IN MONTH AND YEAR.

   Month   Year

7. What were your earnings before taxes (including salary, bonuses, and commissions) when you started working for this employer? WRITE IN DOLLAR AMOUNT AND INDICATE THE RATE AT WHICH YOU WERE PAID.

   $_______.____ | _______.
   Dollars      Cents
   per Hour..1  Week..2  Month..3  Year..4

8. When did you stop working for this employer? WRITE IN MONTH AND YEAR.

   Month   Year

79. What is the name of the parent organization you worked for? WRITE IN NAME.

   Name of organization

80. What is the division or subsidiary within this parent organization that you worked for? WRITE IN NAME.

   Name of division/subsidiary

81. What kind of business or industry was this? WRITE IN BRIEF DESCRIPTION.

   ___________________________________________
82 What form of legal organization was this employer? CIRCLE ONLY ONE.

Publicly held corporation ........................................... 01
Privately held corporation ........................................... 02
General partnership ..................................................... 03
Limited partnership .................................................... 04
Sole proprietorship (you are not the owner) ....................... 05
Sole proprietorship (you are the sole owner) ...................... 06
Private nonprofit organization ....................................... 07
Local governmental organization .................................... 08
State government ....................................................... 09
Federal government (nonmilitary) ................................... 10
Military ................................................................. 11
Other, please specify ................................................ 50

Don't know ............................................................. 98

83 What is the exact location of the establishment where you worked? WRITE IN CITY AND STATE OR FOREIGN COUNTRY.

City

State or foreign country

84 What was the title or name of your final position with this employer? WRITE IN EXACT TITLE.

Title

85 What kind of work were you doing? WRITE IN BRIEF DESCRIPTION OF YOUR PRIMARY DUTIES.

86 How many hours did you usually work each week for this employer? WRITE IN NUMBER OF HOURS.

87 In your last year with this employer, what were your earnings before taxes (including salary, bonuses, and commissions)? WRITE IN DOLLAR AMOUNT AND INDICATE THE RATE AT WHICH YOU WERE PAID.

$ ........................................... Hours

per Hour...1 Week...2 Month...3 Year...4

MBA NEW MATRICULANTS SURVEY
EMPLOYMENT EXPECTATIONS

88 What type of position would you most like to have ten years after graduation from your MBA program? WRITE IN A DESCRIPTION OF THE PRIMARY DUTIES.

__________________________________________________________

__________________________________________________________

__________________________________________________________

89 Do you plan to change employers soon after you complete your MBA? CIRCLE ONLY ONE.

Yes ......................................................... 1

No . PLEASE SKIP TO QUESTION 92 ........................................ 2

I am not currently employed .............................................. 5

Don't know ....................................................................... 8

90. What type of industry or line of business would you prefer in your first full-time employment after graduation from your MBA program? WRITE IN A DESCRIPTION OF THE LINE OF BUSINESS OR SPECIFIC INDUSTRY.

__________________________________________________________

__________________________________________________________

__________________________________________________________

Don't know ....................................................................... [ ]

91. What form of legal organization would you prefer in your first employment after graduation from your MBA program? CIRCLE ONLY ONE.

Publicly held corporation ................................................. 01

Privately held corporation ................................................. 02

General partnership ......................................................... 03

Limited partnership ......................................................... 04

Sole proprietorship (you are not the owner) ....................... 05

Sole proprietorship (you are the sole owner) ....................... 06

Private nonprofit organization ........................................... 07

Local governmental organization ...................................... 08

State government ............................................................ 09

Federal government (nonmilitary) ...................................... 10

Military ........................................................................... 11

Other, please specify ....................................................... 50

Don't know ....................................................................... 98
Questions 92 to 100 concern your first position with any employer after graduation.

92. Do you plan to change positions after you complete your MBA? CIRCLE ONLY ONE.
   Yes ................................................................. 1
   No - PLEASE SKIP TO QUESTION 97 ........................................ 2
   I am not currently employed ..................................................... 5
   Don't know ........................................................................ 8

93. What type of position would you most like to have? WRITE IN A DESCRIPTION OF THE PRIMARY DUTIES.

...........................................................................................................................................

...........................................................................................................................................

...........................................................................................................................................

Don't know ........................................................................................................ 4

94. When would you like to start working at this position? CIRCLE ONLY ONE.
   Within a month after graduation ...................................................... 1
   Two to six months after graduation ................................................. 2
   Seven months to a year after graduation ........................................... 3
   More than a year after graduation .................................................. 4
   Don't know ..................................................................................... 8

95. How long do you expect to spend looking for this position? WRITE IN NUMBER OF MONTHS OR CHECK APPROPRIATE BOX.

...........................................................................................................................................

...........................................................................................................................................

...........................................................................................................................................

Don't know ........................................................................................................ 8

96. What do you think the prospects are for getting the kind of position you would like to have after graduation? CIRCLE ONLY ONE.
   Very likely (76 to 99% certain) ...................................................... 1
   Likely (51 to 75% certain) ......................................................... 2
   Unlikely (26 to 50% certain) ...................................................... 3
   Very Unlikely (1 to 25% certain) ................................................. 4
   Don't know ..................................................................................... 8

MBA NEW MATRICULANTS SURVEY
97. We would like to know about your earnings expectations for your first position after graduation even if you plan to stay in your current position. Please fill in the annual earnings before taxes (including salary, bonuses, and commissions) which satisfy the expectation statements below. WRITE IN ONE EARNINGS LEVEL ON EACH LINE. THE EARNINGS SHOULD BE DECREASING FROM TOP TO BOTTOM. PUT YOUR BEST GUESS ON THE 50% LINE.

<table>
<thead>
<tr>
<th>Dollars per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a 10% chance my earnings will be above..............</td>
</tr>
<tr>
<td>There is a 25% chance my earnings will be above..............</td>
</tr>
<tr>
<td>There is a 50% chance my earnings will be above..............</td>
</tr>
<tr>
<td>There is a 75% chance my earnings will be above..............</td>
</tr>
<tr>
<td>There is a 90% chance my earnings will be above..............</td>
</tr>
</tbody>
</table>

98. How many months would you expect to remain in this position before being promoted? WRITE IN NUMBER OF MONTHS.

<table>
<thead>
<tr>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

99. Here is a list of types of compensation plans. We'd like to know how important you consider each one to be in choosing employment after graduation. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1. Extremely Important
2. Very Important
3. Somewhat Important
4. Not Too Important

a. A defined-benefit pension program.................. 1 2 3 4
b. Any profit-sharing plan................................. 1 2 3 4
c. Compensation in stock or stock options................ 1 2 3 4
d. Performance bonuses.................................... 1 2 3 4
e. Bonuses if the company is boughtout................... 1 2 3 4
f. Commissions............................................. 1 2 3 4
Here are some items that a person may or may not consider important in looking for an employer or position. We would like to know how important you feel each of the items is for your first employment after graduation. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1. Very Important
2. Somewhat Important
3. Not Very Important
4. Not At All Important

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The people I work with are helpful to me in getting my job done</td>
<td>2 3 4</td>
</tr>
<tr>
<td>b. The people I work with are competent in doing their jobs</td>
<td>2 3 4</td>
</tr>
<tr>
<td>c. The people I work with are friendly</td>
<td>2 3 4</td>
</tr>
<tr>
<td>d. I am given a lot of chances to make friends</td>
<td>2 3 4</td>
</tr>
<tr>
<td>e. The chances for promotion are good</td>
<td>2 3 4</td>
</tr>
<tr>
<td>f. The people I work with are friendly and helpful</td>
<td>2 3 4</td>
</tr>
<tr>
<td>g. I have an opportunity to develop my own special abilities</td>
<td>2 3 4</td>
</tr>
<tr>
<td>h. Travel to and from work is convenient</td>
<td>2 3 4</td>
</tr>
<tr>
<td>i. I receive enough help and equipment to get the job done</td>
<td>2 3 4</td>
</tr>
<tr>
<td>j. I am not asked to do excessive amounts of work</td>
<td>2 3 4</td>
</tr>
<tr>
<td>k. The work is interesting</td>
<td>2 3 4</td>
</tr>
<tr>
<td>l. I have enough information to get the job done</td>
<td>2 3 4</td>
</tr>
<tr>
<td>m. The pay is good</td>
<td>2 3 4</td>
</tr>
<tr>
<td>n. I am given a lot of freedom to decide how I do my own work</td>
<td>2 3 4</td>
</tr>
<tr>
<td>o. I am given a chance to do the things I do best</td>
<td>2 3 4</td>
</tr>
<tr>
<td>p. The job security is good</td>
<td>2 3 4</td>
</tr>
<tr>
<td>q. The problems I am expected to solve are hard enough</td>
<td>2 3 4</td>
</tr>
<tr>
<td>r. My supervisor is competent in doing (his/her) job</td>
<td>2 3 4</td>
</tr>
<tr>
<td>s. My responsibilities are clearly defined</td>
<td>2 3 4</td>
</tr>
<tr>
<td>t. I have enough authority to do my job</td>
<td>2 3 4</td>
</tr>
<tr>
<td>u. My fringe benefits are good</td>
<td>2 3 4</td>
</tr>
<tr>
<td>v. The physical surroundings are pleasant</td>
<td>2 3 4</td>
</tr>
<tr>
<td>w. I can see the results of my work</td>
<td>2 3 4</td>
</tr>
<tr>
<td>x. I can forget about my personal problems</td>
<td>2 3 4</td>
</tr>
<tr>
<td>y. I have enough time to get the job done</td>
<td>2 3 4</td>
</tr>
<tr>
<td>z. My supervisor is concerned about the welfare of those supervised</td>
<td>2 3 4</td>
</tr>
<tr>
<td>aa. I am free from the conflicting demands that others make of me</td>
<td>2 3 4</td>
</tr>
<tr>
<td>ab. The hours are good</td>
<td>2 3 4</td>
</tr>
<tr>
<td>ac. My supervisor is successful in getting people to work together</td>
<td>2 3 4</td>
</tr>
<tr>
<td>ad. Promotions are handled fairly</td>
<td>2 3 4</td>
</tr>
<tr>
<td>ae. The people I work with take a personal interest in me</td>
<td>2 3 4</td>
</tr>
<tr>
<td>af. Employer is concerned about giving everyone a chance to get ahead</td>
<td>2 3 4</td>
</tr>
<tr>
<td>ag. My supervisor is friendly</td>
<td>2 3 4</td>
</tr>
<tr>
<td>ah. My supervisor is helpful to me in getting my job done</td>
<td>2 3 4</td>
</tr>
</tbody>
</table>
ATTITUDES

101 Here is a list of personal characteristics. We would like you to tell us how important you feel each one is in becoming a successful business manager or executive. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1. Very Important
2. Somewhat Important
3. Not Very Important
4. Not At All Important

a. Initiative ........................................... 1 2 3 4
b. Communication skills ........................................... 1 2 3 4
c. Cunning ........................................... 1 2 3 4
d. Ability to organize ........................................... 1 2 3 4
e. Assertiveness ........................................... 1 2 3 4
f. Ability to capitalize on change ........................................... 1 2 3 4
g. Ability to delegate tasks ........................................... 1 2 3 4
h. Can adapt theory to practical situations ........................................... 1 2 3 4
i. Good intuition ........................................... 1 2 3 4
j. Ability to motivate others ........................................... 1 2 3 4
k. Team player ........................................... 1 2 3 4

102 Indicate the extent to which you think you have each of these characteristics. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1. To A Great Extent
2. To Some Extent
3. Not At All

a. Initiative ........................................... 1 2 3
b. Communication skills ........................................... 1 2 3
c. Cunning ........................................... 1 2 3
d. Ability to organize ........................................... 1 2 3
e. Assertiveness ........................................... 1 2 3
f. Ability to capitalize on change ........................................... 1 2 3
g. Ability to delegate tasks ........................................... 1 2 3
h. Can adapt theory to practical situations ........................................... 1 2 3
i. Good intuition ........................................... 1 2 3
j. Ability to motivate others ........................................... 1 2 3
k. Team player ........................................... 1 2 3
103. Next we would like to know which characteristics you expect to be most enhanced by your graduate business school experience. CIRCLE ALL THAT APPLY.

- Initiative
- Communication skills
- Cunning
- Ability to organize
- Assertiveness
- Ability to capitalize on change
- Ability to delegate tasks
- Can adapt theory to practical situations
- Good intuition
- Ability to motivate others
- Team player

104. Here is a list of statements about management in organizations. Please indicate the extent to which you believe these statements are true. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1. Strongly Agree
2. Somewhat Agree
3. Neither Agree Nor Disagree
4. Somewhat Disagree
5. Strongly Disagree

- Most of the important decisions in organizations involve the allocation of scarce resources.
- Organizational goals and decisions emerge from ongoing processes of bargaining and negotiation among individuals and groups.
- Managers spend most of their time shifting rapidly from one meeting with one set of problems to another meeting where they encounter a completely different blend of challenges.
- High performance companies encourage and reward innovative entrepreneurial actions by employees.
10. Indicate how relevant you think each of the following activities is for the performance of successful managers. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1 Very Relevant
2 Somewhat Relevant
3 Not At All Relevant

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Set goals and policies under conditions of uncertainty</td>
<td></td>
</tr>
<tr>
<td>b. Achieve &quot;delicate balance&quot; in allocation of scarce resources</td>
<td></td>
</tr>
<tr>
<td>c. Keep on top of large, complex sets of activities</td>
<td></td>
</tr>
<tr>
<td>d. Get support from bosses</td>
<td></td>
</tr>
<tr>
<td>e. Get support from corporate staff and other constituents</td>
<td></td>
</tr>
<tr>
<td>f. Motivate, coordinate, and control large, diverse group of subordinates</td>
<td></td>
</tr>
</tbody>
</table>
Here are some opinions about the government and economy. Please tell us whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree.

CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1. Strongly Agree
2. Somewhat Agree
3. Somewhat Disagree
4. Strongly Disagree
5. No Opinion

1. In our society everyone must look out for himself/herself. It is of little use to unite with others and fight for one’s goals in politics or in unions.

2. The economy can run only if businessmen/women make good profits. That benefits everyone in the end.

3. The government must see to it that everyone has a job and that prices are stable, even if the rights of businessmen/women have to be restricted.

4. It is the responsibility of government to meet everyone’s needs, even in case of sickness, poverty, unemployment, and old age.

5. If social welfare benefits such as disability and unemployment compensation and early retirement pensions are as high as they are now, it only makes people not want to work anymore.

6. All in all, one can live well in America.

7. Generally speaking, business profits are distributed fairly in the United States.

8. If someone has a high social or economic position, that indicates the person has special abilities or great accomplishments.

**10** What degree of financial support should the federal government provide to each of the following if they are in serious financial trouble? CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

1. Substantial Support
2. Moderate Support
3. No Support

a. Corporations doing national defense work
b. Corporations providing necessary services, such as railroads
c. City or state governments
d. Individuals who can’t support themselves
e. Foreign countries friendly to the U.S.
108. Here is a list of various aspects of life. We would like to know how important each of these aspects of life is for you. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE FOLLOWING SCALE:

<table>
<thead>
<tr>
<th>Important</th>
<th>Unimportant</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. One's own family and children</td>
<td>01 02 03 04 05 06 07</td>
</tr>
<tr>
<td>b. Career and work</td>
<td>01 02 03 04 05 06 07</td>
</tr>
<tr>
<td>c. Free time and relaxation</td>
<td>01 02 03 04 05 06 07</td>
</tr>
<tr>
<td>d. Friends and acquaintances</td>
<td>01 02 03 04 05 06 07</td>
</tr>
<tr>
<td>e. Relatives</td>
<td>01 02 03 04 05 06 07</td>
</tr>
<tr>
<td>f. Religion and church</td>
<td>01 02 03 04 05 06 07</td>
</tr>
<tr>
<td>g. Politics and public life</td>
<td>01 02 03 04 05 06 07</td>
</tr>
</tbody>
</table>

Here is a list of some ways in which different people describe themselves. Please indicate the category that best applies to you. CIRCLE ONE RESPONSE FOR EACH ITEM ACCORDING TO THE INDICATED SCALES.

109. How often do you feel:

1. All or Most of the Time
2. A Good Part of the Time
3. Some of the Time
4. A Little or None of the Time

<table>
<thead>
<tr>
<th></th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. My mind is as clear as it used to be</td>
<td></td>
</tr>
<tr>
<td>b. I find it easy to do the things I used to do</td>
<td></td>
</tr>
<tr>
<td>c. My life is interesting</td>
<td></td>
</tr>
<tr>
<td>d. I feel that I am useful and needed</td>
<td></td>
</tr>
<tr>
<td>e. My life is pretty full</td>
<td></td>
</tr>
<tr>
<td>f. I feel hopeful about the future</td>
<td></td>
</tr>
</tbody>
</table>

110. How often are these true for you?

1. Often True
2. Sometimes True
3. Rarely True
4. Never True

<table>
<thead>
<tr>
<th></th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I feel that I am a person of worth, at least as much as others</td>
<td></td>
</tr>
<tr>
<td>b. I am able to do things as well as most other people</td>
<td></td>
</tr>
<tr>
<td>c. On the whole, I feel good about myself</td>
<td></td>
</tr>
</tbody>
</table>

111. So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all? CIRCLE ONLY ONE.

<table>
<thead>
<tr>
<th></th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretty well satisfied</td>
<td></td>
</tr>
<tr>
<td>More or less satisfied</td>
<td></td>
</tr>
<tr>
<td>Not satisfied at all</td>
<td></td>
</tr>
<tr>
<td>Don't know</td>
<td></td>
</tr>
</tbody>
</table>
112. Suppose you owned a lottery ticket that had a 50% chance of paying nothing and a 50% chance of paying $100. What is the lowest price you would sell the ticket for? WRITE IN NUMBER OF DOLLARS.

$[ ]$ Dollars

113. Suppose you owned a lottery ticket that had a 50% chance of paying nothing and a 50% chance of paying $100,000. What is the lowest price you would sell the ticket for? WRITE IN NUMBER OF DOLLARS.

$[ ]$ Dollars

114. Suppose you owned a lottery ticket that had a 50% chance of paying $25,000 and a 50% chance of paying $75,000. What is the lowest price you would sell the ticket for? WRITE IN NUMBER OF DOLLARS.

$[ ]$ Dollars

115. Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent or what? CIRCLE ONLY ONE.

Strong Democrat ................................................................. .01
Not very strong Democrat ....................................................... .02
Independent, close to Democrat .............................................. .03
Independent, close to neither party ........................................ .04
Independent, close to Republican ......................................... .05
Not very strong Republican .................................................... .06
Strong Republican ............................................................... .07
Other party, please specify. ................................................... .50
Don’t know .............................................................................. 98

MBA NEW MATRICULANTS SURVEY
## FINANCIAL STATUS

The following items ask for information about the financial status of your household. A household consists of you and any other person(s) with whom you live and with whom you share expenses and/or income. We are interested in the total income, major assets, and major liabilities of your household.

### 116 INCOME:
What was your household's 1984 Adjusted Gross Income? WRITE IN AMOUNTS IN DOLLARS, AGE, AND RELATIONSHIP TO YOU FOR EACH HOUSEHOLD MEMBER. CHECK "ZERO" IF THE AMOUNT WAS ACTUALLY ZERO. CHECK "DOES NOT APPLY" IF NO SUCH PERSON LIVES IN THE HOUSEHOLD.

<table>
<thead>
<tr>
<th>Age</th>
<th>Zero</th>
<th>Does Not Apply</th>
<th>Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Yourself</td>
<td>[ ]</td>
<td>[ ]</td>
<td>$</td>
</tr>
<tr>
<td>b. Your spouse</td>
<td>[ ]</td>
<td>[ ]</td>
<td>$</td>
</tr>
<tr>
<td>c. Other</td>
<td>[ ]</td>
<td>[ ]</td>
<td>$</td>
</tr>
<tr>
<td>Relationship to you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Other</td>
<td>[ ]</td>
<td>[ ]</td>
<td>$</td>
</tr>
<tr>
<td>Relationship to you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Other</td>
<td>[ ]</td>
<td>[ ]</td>
<td>$</td>
</tr>
<tr>
<td>Relationship to you</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 117. ASSETS:
Please indicate which of the following assets you own and their current market value. WRITE IN AMOUNTS IN DOLLARS. CHECK "DOES NOT APPLY" IF YOU DO NOT OWN THE LISTED ASSET.

<table>
<thead>
<tr>
<th>Does Not Apply</th>
<th>Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Primary residence</td>
<td>$</td>
</tr>
<tr>
<td>b. Other real property</td>
<td>$</td>
</tr>
<tr>
<td>c. Automobiles/other vehicles</td>
<td>$</td>
</tr>
<tr>
<td>d. Checking/savings accounts</td>
<td>$</td>
</tr>
<tr>
<td>e. Retirement accounts</td>
<td>$</td>
</tr>
<tr>
<td>f. Money market accounts</td>
<td>$</td>
</tr>
<tr>
<td>g. Stocks/bonds/mutual funds</td>
<td>$</td>
</tr>
<tr>
<td>h. Furniture/antiques</td>
<td>$</td>
</tr>
<tr>
<td>i. Art/jewelry/other collectibles</td>
<td>$</td>
</tr>
<tr>
<td>j. Other assets</td>
<td>$</td>
</tr>
</tbody>
</table>
LIABILITIES: Please indicate which of the following liabilities you have and list the current outstanding amounts. WRITE IN AMOUNTS IN DOLLARS. CHECK "DOES NOT APPLY" IF YOU DO NOT HAVE THE LISTED LIABILITY.

<table>
<thead>
<tr>
<th></th>
<th>Does Not Apply</th>
<th>Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Residential mortgages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Other mortgages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Automobile loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Educational loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Other loans or liabilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PERSONAL AND FAMILY BACKGROUND

Now we would like to ask you some questions about yourself and your family.

119 What is your birth date? WRITE IN EXACT DATE.

[ ] [ ] [ ]
Month Day Year

120 Sex. CIRCLE ONLY ONE.

[ ] Male

[ ] Female

121 What race do you consider yourself? CIRCLE ONLY ONE.

[ ] White

[ ] Black

[ ] American Indian, Aleut, Eskimo

[ ] Asian or Pacific Islander

[ ] Other, please specify

122 Are you of Spanish/Hispanic origin or descent?

[ ] Yes, Mexican, Mexican-American, Chicano

[ ] Yes, Puerto Rican

[ ] Yes, Cuban

[ ] Yes, Other Spanish/Hispanic

[ ] No (not Spanish/Hispanic)

123 In what country were you born? WRITE IN NAME.

__________________________________________________________________________
Name of country

124 What is your citizenship? WRITE IN ALL THAT APPLY.

a  

__________________________________________________________________________
Name of country

b  

__________________________________________________________________________
Name of country

125 Where were you living when you were 16 years old? WRITE IN CITY AND STATE OR FOREIGN COUNTRY.

__________________________________________________________________________
City

__________________________________________________________________________
State or foreign country
126 With whom were you living when you were 16 years old? CIRCLE ONLY ONE.

- Mother and father
- Mother alone
- Father alone
- Mother and stepfather
- Father and stepmother
- Other relatives
- Friends
- In an institution... Please skip to question 132
- Other, please specify.

127 What was your father’s (or guardian’s) main occupation when you were 16 years old? WRITE IN A BRIEF DESCRIPTION.

___________________________________________________________________________________

128 What was the highest level of education attained by your father (or guardian)? CIRCLE ONLY ONE.

- Some high school, or less
- Finished high school or earned a high school equivalency diploma or certificate
- Vocational, trade, or secretarial school after high school
  - Less than two years
  - Two years or more
- College program
  - Less than two years
  - Two or more years (including two-year degree)
  - Finished college (four or five-year degree)
- Post-graduate program
  - Master of Business Administration or equivalent
  - Other master’s degree, please specify
  - Doctoral Degree in Business or Economics
  - Doctor of Medicine
  - Juris Doctor or equivalent law degree
  - Other doctoral degree, please specify
- Other degree, please specify
- Don’t know
129 Did your mother work for pay around the time you were 16 years old? CIRCLE ONLY ONE.
Yes ........................................ .............................. .............................. .............................. ....... 1
No .......................................................... .............................. .............................. ................. ........... 2
Don't know .......................................................... .............................. .............................. ................. ........... 8

130 What was the highest level of education attained by your mother? CIRCLE ONLY
ONE.
Some high school, or less .......................................................... .............................. ................. ........... 01
Finished high school or earned a high school equivalency diploma or certificate .......................................................... .............................. ................. ........... 02
Vocational, trade, or secretarial school after high school
Less than two years .......................................................... .............................. ................. ........... 03
Two years or more .......................................................... .............................. ................. ........... 04
College program
Less than two years .......................................................... .............................. ................. ........... 05
Two or more years (including two-year degree) .......................................................... .............................. ................. ........... 06
Finished college (four or five-year degree) .......................................................... .............................. ................. ........... 07
Post-graduate program
Master of Business Administration or equivalent .......................................................... .............................. ................. ........... 08
Other master's degree, please specify .......................................................... .............................. ................. ........... 09
Doctoral Degree in Business or Economics .......................................................... .............................. ................. ........... 10
Doctor of Medicine .......................................................... .............................. ................. ........... 11
Juris Doctor or equivalent law degree .......................................................... .............................. ................. ........... 12
Other doctoral degree, please specify .......................................................... .............................. ................. ........... 13
Other degree, please specify .......................................................... .............................. ................. ........... 50
Don't know .......................................................... .............................. ................. ........... 98

131. How many brothers and sisters have you ever had? Count those born alive, but no longer living, as well as those alive now. Include stepbrothers, stepsisters, and children adopted by your parents. WRITE IN EXACT NUMBER OF SIBLINGS OR "00" IF YOU HAVE NO SIBLINGS.

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132. Have you ever been married? CIRCLE ONLY ONE.
Yes .......................................................................................... .......................................................... 1
No ... PLEASE SKIP TO RECORDKEEPING SECTION ON PAGE 43 .......................................................... 2
133 When were you first married? WRITE MONTH AND YEAR OF WEDDING.

___ ___  
Month Year

134 What is your current marital status? CIRCLE ONLY ONE.

Married and living with your spouse ................................................................. 1
Married and not living with your spouse ... PLEASE SKIP TO QUESTION 149 ... 2
Legally separated ... PLEASE SKIP TO QUESTION 149 ......................................... 3
Widowed ... PLEASE SKIP TO QUESTION 149 ........................................................ 4
Divorced ... PLEASE SKIP TO QUESTION 149 ........................................................ 5

135. In what country was your spouse born? WRITE IN NAME OF COUNTRY.

___________________________  ________________
Name of country

136. What is the highest level of education attained by your spouse? CIRCLE ONLY ONE.

Some high school, or less ......................................................................................... 01
Finished high school or earned a high school equivalency diploma or certificate .......... 02
Vocational, trade, or secretarial school after high school

Less than two years .................................................................................................... 03
Two years or more ..................................................................................................... 04
College program

Less than two years .................................................................................................... 05
Two or more years (including two-year degree) ....................................................... 06
Finished college (four or five-year degree) ............................................................... 07
Post-graduate program

Master of Business Administration or equivalent .................................................... 08
Other master's degree, please specify ................................................................. 09
Doctoral Degree in Business or Economics .......................................................... 10
Doctor of Medicine .................................................................................................. 11
Juris Doctor or equivalent law degree ...................................................................... 12
Other doctoral degree, please specify ................................................................. 13
Other degree, please specify ................................................................................... 50
Don't know ............................................................................................................... 98

137. Is your spouse currently in school? CIRCLE ONLY ONE.

Yes, full-time ........................................................................................................... 1
Yes, part-time ......................................................................................................... 2
No ............................................................................................................................ 3
138. Indicate the choice from the list below which best describes your spouse's current employment situation. CIRCLE ONLY ONE.

Employed full-time (35 or more hours a week) ........................................... 1
Employed part-time (less than 35 hours a week) ........................................... 2
Not employed or seeking work ... PLEASE SKIP TO QUESTION 149 ............... 3
Not employed but seeking full-time work ... PLEASE SKIP TO QUESTION 149 ... 4
Not employed but seeking part-time work ... PLEASE SKIP TO QUESTION 149 ... 5

139. What is the name of the parent organization your spouse works for? WRITE IN NAME.

______________________________________________________________
Name of organization

140. What is the division or subsidiary within this parent organization that your spouse works for? WRITE IN NAME.

______________________________________________________________
Name of division/subsidiary

141. What kind of business or industry is this? WRITE IN BRIEF DESCRIPTION.

______________________________________________________________

______________________________________________________________

142. What form of legal organization is this employer? CIRCLE ONLY ONE.

Publicly held corporation ................................................................. 01
Privately held corporation ................................................................. 02
General partnership ........................................................................... 03
Limited partnership ........................................................................... 04
Sole proprietorship (you are not the owner) ....................................... 05
Sole proprietorship (you are the sole owner) ...................................... 06
Private nonprofit organization .......................................................... 07
Local governmental organization ......................................................... 08
State government .............................................................................. 09
Federal government (nonmilitary) ....................................................... 10
Military ............................................................................................. 11
Other, please specify .......................................................................... 50

Don't know .......................................................................................... 98

143. What is the exact location of the establishment where your spouse works? WRITE IN CITY AND STATE OR FOREIGN COUNTRY?

City

State or foreign country
144 What is the title or name of your spouse's position with this employer? WRITE IN EXACT TITLE.

Title

145 What kind of work is your spouse doing? WRITE IN A BRIEF DESCRIPTION OF YOUR SPOUSE'S PRIMARY DUTIES.

146 When did your spouse start working for this employer? WRITE IN MONTH AND YEAR.

Month Year

Don't know

147 What are your spouse's earnings before taxes (including salary, bonuses, and commissions)? WRITE IN DOLLAR AMOUNT AND INDICATE THE RATE AT WHICH YOUR SPOUSE IS PAID.

Dollars Cents

per Hour... Week... Month... Year...

148 How many hours does your spouse usually work each week for this employer? WRITE IN "R OF HOURS.

149 Indicate the ages of all children living with you or directly supported by you. WRITE IN THE AGES OF YOUR SIX OLDEST CHILDREN AND INDICATE NUMBER OF ADDITIONAL CHILDREN, IF ANY.

a. Child 1
b. Child 2
c. Child 3
d. Child 4
e. Child 5
f. Child 6
g. Number of additional children

150 How many children do you eventually expect to have? WRITE IN NUMBER.
RECORDKEEPING INFORMATION

The information on this page will be used in case we need to keep in touch and is not part of the survey itself. Nevertheless, this information will also be kept strictly confidential.

1. PLEASE PRINT your name, address, and telephone number where you can be reached during the coming year.

   Your name
   Street address

   ( )__________ IN WHOSE NAME IS THE TELEPHONE LISTED?
   Telephone
   CIRCLE ONLY ONE.

   Office use only: FIPS:___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]

2. PLEASE PRINT the name, address, and telephone number of your parents (or one parent).

   Parent's name
   Street address

   ( )__________ IN WHOSE NAME IS THE TELEPHONE LISTED?
   Telephone
   CIRCLE ONLY ONE.

   Office use only: FIPS:___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]

3. PLEASE PRINT the name, address, and telephone number of two people who will know how to get in touch with you during the following year.

   a. Name
      Street address

      ( )__________ IN WHOSE NAME IS THE TELEPHONE LISTED?
      Telephone
      CIRCLE ONLY ONE.

      Office use only: FIPS:___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]

   b. Name
      Street address

      ( )__________ IN WHOSE NAME IS THE TELEPHONE LISTED?
      Telephone
      CIRCLE ONLY ONE.

      Office use only: FIPS:___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]___[blank]

PLEASE CONTINUE ON THE NEXT PAGE.
SCHOOL RECORD INFORMATION

PERMISSION FORM

This form requests your permission to allow any school you attended after high school to access certain record information: SAT, ACT, and GMAT scores when available, and to obtain your social security number. This information will greatly enhance the results of the surveys and like all other information collected here will be used solely for the purpose of preparing statistical summaries. We wish to thank you in advance for your help and cooperation.

Please give the MBA NEW MATRICULANTS SURVEY a copy of my school records. This information includes grade point averages, SAT, ACT, and GMAT scores, honors, school costs, and financial aid awards.

Signature
Print name signed above
Street address
City State Zip Code

SOCIAL SECURITY ACCOUNT NUMBER

Giving us your Social Security Number is completely voluntary. This number is needed so that any additional information gets matched with the correct individual.

PLEASE PRINT your Social Security Number in the space below:

[———] Social Security Number

THANK YOU FOR YOUR PARTICIPATION.
IV. RESPONSE RATES AND SAMPLE SIZES BY STRATUM AND PRIMARY SAMPLING UNIT
This section reports actual sample sizes and response rates by sampled school and stratum. To preserve anonymity of schools as well as persons, schools are identified only by arbitrary sequential numbers here, rather than by name.

In the sampling scheme used in the New Matriculants Survey, schools formed the primary sampling units, and were sampled with replacement. Thirty-five students were sampled without replacement from each selected school, except when a school had fewer than that number of new matriculants. At schools which were sampled twice, 70 new matriculants were randomly selected. Schools 20 and 85 in Table 4.1 were sampled twice, yielding a sample of 98 different schools and 100 different primary sampling units. Six schools refused to cooperate, and one cooperative school was unable to produce sufficiently accurate records to permit sampling of students. Sampling of schools and students was carried out by NORC personnel under the supervision of Martin Frankel. Sampling of students was also carried out by NORC personnel under the supervision of Martin Frankel, except in several schools where names of students were not released to NORC or GMAC; at these "confidentiality schools," helpful school personnel performed sampling of students after instruction by NORC personnel.

Table 4.1 reports total sample size, number of refusals, number of responses via the written questionnaire, and the number of responses via a telephone short-form interview.
Table 4.1 -- Response Rates by Primary Sampling Unit (School)

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Table 4.1 -- continued

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Table 4.1 -- continued

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Table 4.2 -- Response Rates by Stratum

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