

A FINANCIAL TAXONOMY OF PRIVATE
LIBERAL ARTS COLLEGES II /

by

WILLIAM M. ANDERSON, JR.

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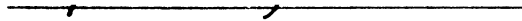
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APPROVED:


Loyd Andrew, Chairman


Charles Atwell


Burton D. Friedman


Roy E. McTarnaghan


Prince B. Woodard

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Blacksburg, Virginia

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In expressing my deep appreciation for the assistance of my committee members, I feel as James Garfield did when he addressed Alumni of Williams College and stated:

I am not willing that the discussion should close without mention of the value of a true teacher. Give me a log hut, with only a simple bench, Mark Hopkins on one end and I on the other, and you may have all the buildings, apparatus and libraries without him (1871).

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Chapter I

INTRODUCTION

For several years, the role of private colleges -- and of the small private, liberal arts college in particular -- in higher education has declined. From 1900 to 1950 enrollments of public and private four-year colleges were roughly equal and grew at about the same rate. As shown in Table I, from 1950 to 1973, enrollments in private four-year enrollments grew by only .9 percent while public four-year enrollments increased by 9.8 percent. As of 1973, private institutions enrolled less than a third of the students in four-year programs.

As Howard Bowen and John Minter stated:

That the rate of growth in the private sector was slower than that in the public sector was due partly to a vigorous policy--adopted by all the states and by the federal government--to expand educational opportunity. It was also due in part to the policy of many private institutions to limit their enrollments in order to maintain the kind of community life that had been traditional in these institutions and also to increase selectivity in the admission of students. The change in the balance of enrollments between the private and public sectors was largely the outcome of conscious policies pursued by government and by the private institutions themselves (1975, p. 81).

But this statement does not explain all factors influencing enrollment trends of recent years for the less selective private four-year liberal arts colleges.

TABLE I
 ENROLLMENT IN FOUR-YEAR INSTITUTIONS OF
 HIGHER EDUCATION, UNITED STATES,
 1900 to 1973

(000 Omitted)

YEAR	PRIVATE FOUR-YEAR INSTITUTIONS		PUBLIC FOUR-YEAR INSTITUTIONS		
	All Students	Enrollment	% Increase	Enrollment	% Increase
1900		147	-	91	-
1910		189	28.6%	166	82.4%
1920		278	47.1%	312	87.9%
1930		549	97.5%	496	59.0%
1940		655	19.3%	689	38.9%
1950		1249	90.7%	1167	69.4%
	Degree- Credit Students				
1950		1093	-	986	-
1955		1137	4.0%	1233	25.0%
1960		1414	24.4%	1742	41.3%
1965		1810	28.1%	2915	67.3%
1970		2010	11.0%	4280	46.8%
1973		2028	.9%	4700	9.8%

Sources:

1900 to 1950, Statistical Abstract of the United States, 1953, p. 125. 1950 to 1973, American Council on Education, A Fact Book on Higher Education, First Issue, 1974, pp. 9-17.

Liberal Arts Colleges have been classified in recent years by the Carnegie Commission on Higher Education as Liberal Arts Colleges I and Liberal Arts Colleges II. Liberal Arts Colleges I are termed "elite," and generally require a combined Scholastic Aptitude Test (SAT) score of 1075 or above for admission (Carnegie Commission on Higher Education, 1973). Liberal Arts Colleges II, the "invisible" colleges (Astin and Lee, 1972), are as a group far less stringent in their admission standards. Although these colleges accept highly qualified students, the general level of SAT scores is below 1074.

From 1973 to 1974, 38.6 percent of the private colleges classified as Liberal Arts Colleges I reported a decline in enrollment. For this same period, 64.1 percent of the private colleges classified as Liberal Arts Colleges II reported a decline in enrollment (Lanier and Anderson, 1975). Thus while the private liberal arts colleges as a whole experienced a modest enrollment increase, over half of the private colleges classified as Liberal Arts Colleges II decreased in enrollment.

William W. Jellema cited a number of reasons for these declining enrollments:

There are many complex reasons for this, including the two-price system which tags the educational garment at a higher price if purchased in a private institution than if purchased in a public one down the street. In some areas, the broad and rapid expansion of community colleges, undertaken with insufficient regard for existing institutions, has

exacerbated this comparison. The reasons for the enrollment drop also include an apparent decline in servitude to the credentialing system which placed mystical as well as monetary value on a baccalaureate degree. They include the end of a military draft that formally exempted those attending college. They include the current strong emphasis on vocationalism (1973, pp. 54-55).

The fiscal implications associated with the enrollment decline of private institutions is clearly known. National financial studies by the Carnegie Commission on Higher Education (1970), Froomkin, Stump, and Tammany (1972), The National Commission on the Financing of Postsecondary Education (1973), and Lanier and Anderson (1975) helped point out differences in the patterns of revenues and expenditures between public and private colleges (private colleges generally relied more on tuition revenues, and generally received less governmental student aid revenues than public colleges and universities). William Jellema summarized the financial implications of declining enrollments in private colleges:

If private higher education is to survive financially, it must also survive in enrollment (1973, p. 55).

Faced with declining enrollments and thus less income from tuition and fees, many private colleges entered the 1970's in a condition of financial stress. This was especially true of private colleges classified as Liberal Arts Colleges II. Bowen and Minter observed:

The position of the Liberal Arts Colleges II especially appeared to worsen as indicated by the precipitous decline in the percentage of total expenditures devoted to instruction and departmental research, this heavy and increasing dependence on current gifts, and their return to deficit status in 1973-74 (1975, p. 58).

Since 1970, approximately sixty small, private liberal arts colleges have closed or merged with public or private institutions (Cheit, 1971; and Wynn, 1974). Bowen's study suggested that 25 percent of the private institutions he studied faced serious financial difficulty (1975).

The plight of this important sector of higher education led President Gerald R. Ford to express his concern. In a memorandum to the U. S. Commissioner, President Ford wrote:

In a conversation with me several weeks ago, four university professors urged me to pay special attention to the plight of the small, private liberal arts colleges.

As you are aware, many face unusual financial hardships and some of the finest may be in danger of having to close. This same point came up recently with representatives of the higher education community.

These colleges represent a valuable national resource, and I want to be informed accurately and thoroughly about the facts of their situation and what steps might be taken to be helpful.

Will you please look into this for me and report your findings as soon as it is possible consistent with the complexity of the problem.

Signed: Gerald R. Ford (April 9, 1975)

In summary, private four-year liberal arts colleges today enroll a smaller proportion of the students attending institutions of higher education in the United States. Faced with enrollment declines that often result in increased financial distress, many private institutions are confronted with an uncertain future. This is especially true of the institutions classified as Liberal Arts Colleges II. This alarming situation directed the attention of many financial analysts to the private sector of higher education.

NEED FOR THE STUDY

Studies by Cheit (1971), Jellema (1973), Meeth (1974), Wynn (1974), Shulman (1974), Lanier and Anderson (1975), and Andrew and Friedman (1976) examined the financial plight of private institutions. In addition, The National Commission on the Financing of Postsecondary Education, as established by Public Law 92-318 (Section 140) and appointed by the President and Congress, was charged with studying:

The nature and causes of serious financial distress facing institutions of postsecondary education (National Commission on the Financing of Postsecondary Education, 1973, p. 5).

This Commission was also charged with developing long-range solutions to the problems of financing postsecondary education.

All of these studies have produced many pages of analyses of private colleges. Indeed, the topic at first glance seems to have been exhaustively investigated;

however, some recent research cast a shadow of doubt over the methodology used by previous investigators to examine the financial condition of institutions classified as Liberal Arts Colleges II.

Basic to any study of institutions of higher education is the need for a systematic approach to classifying the colleges and universities to be investigated. For years, the National Center of Education Statistics of the United States Office of Education has collected data concerning colleges and universities. This data collection has taken place in the form of an annual survey entitled the Higher Education General Information Survey (HEGIS). Institutions included in this survey have been classified as: universities, four-year colleges, and two-year colleges. The colleges and universities in each of these categories is usually sub-classified by type of control (public and private). In discussing the adequacy of this classification system, John and Millet stated:

But the classification structure and the principle of enumeration set forth in the annual Directory leave a good deal to be desired. The reasons for this observation are clearly implied in the material which follows and need not be elaborated here. It is sufficient to comment that there are complexities in establishing common characteristics among institutions of higher education upon which to build an adequate classification scheme (Irwin, 1973, p. 1).

The Carnegie Commission on Higher Education during its study of higher education from 1967 through 1973 decided to develop its own taxonomy of institutional types for its enumerative and analytical purposes. This classification scheme was unique in several ways. First, it attempted both a program distinction and a qualitative distinction among the various colleges and universities. Thus, the new system revealed to a greater extent than other classification arrangements the real diversity among institutions of higher education in the United States.

The Carnegie Commission taxonomy also counted each separate campus as an institution; the Office of Education classification system counted multi-campus institutions as one institution. Thus, the Carnegie system contained a total of 2827 institutions in 1970, while the Office of Education's system contained 2565 colleges and universities for that same year. The categories of the Carnegie classification system (Carnegie Commission, 1973) are:

1.0 Doctoral-Granting Institutions

- 1.1 Heavy emphasis upon research
The fifty leading institutions in terms of federal government academic science support and awarding at least fifty Ph.D.'s in 1967-68.
- 1.2 Moderate emphasis upon research
The next fifty leading institutions in terms of federal financial support and awarding fifty Ph.D.'s plus M.D.'s in 1967-68.

- 1.3 Moderate emphasis on doctoral programs
Institutions awarding forty or more
Ph.D.'s and M.D.'s or receiving at
least four million dollars in federal
financial support.
- 1.4 Limited emphasis upon doctoral programs
Institutions awarding at least ten
Ph.D.'s in 1967-68.
- 2.0 Comprehensive Colleges
 - 2.1 Comprehensive Colleges I
Institutions offering liberal arts and
"several" other programs, but only an
"extremely limited" doctoral program.
 - 2.2 Comprehensive Colleges II
State colleges and some private colleges
offering liberal arts and at least one
professional program. Did not include
private institutions with fewer than
1,500 students or public institutions
with fewer than 1,000 students.
- 3.0 Liberal Arts Colleges
 - 3.1 Liberal Arts Colleges I
Colleges scoring 58 or above on Astin's
selectivity index or included among
the two hundred leading baccalaureate
institutions in terms of their gradu-
ates receiving Ph.D.'s at forty leading
universities.
 - 3.2 Liberal Arts Colleges II
All other liberal arts colleges.
- 4.0 All Two-Year Colleges and Institutes
- 5.0 Professional Schools and Other Specialized
Institutions
 - 5.1 Theological seminaries, bible colleges,
and other institutions offering degrees
in religion
 - 5.2 Medical schools and medical centers
 - 5.3 Other separate health professional
schools

- 5.4 Schools of engineering and technology
- 5.5 Schools of business and management
- 5.6 Schools of art, music, design, etc.
- 5.7 Schools of law
- 5.8 Teachers colleges
- 5.9 Other specialized institutions
Included graduate centers, maritime
academies, military institutes, and
miscellaneous.

The taxonomy developed by the Carnegie Commission was an improvement over the system used by the Office of Education. However, the adequacy of the sub-classification for liberal arts colleges, Liberal Arts Colleges II category, has been questioned by some researchers. The Carnegie technical paper itself makes note of some arbitrary assignments among the two liberal arts categories (Carnegie Commission, 1973).

Richard W. Jonsen of Syracuse University observed five problems associated with the Liberal Arts Colleges II category. He noted:

- (1) It is a definition largely by exclusion. ---
- (2) Therefore the positive characteristics of the population remain undefined. ---
- (3) The Carnegie classification probably includes some colleges which are inappropriately labeled as small liberal arts colleges (a few larger institutions which are apparently included because of their lack of complexity). ---

- (4) The Carnegie list does include a large number of denominational institutions, because these tend to be small and less selective. ---
- (5) The most elusive aspect of defining in this manner is the failure to reveal the reality of purpose, performance or outcome --- (Andrew and Friedman, 1976, p. II. 14).

In May 1976, a report entitled, A Study of the Causes for the Demise of Certain Small, Private Liberal Arts Colleges in the United States was published by Virginia Polytechnic Institute and State University under the auspices of the U. S. Office of Education. The authors of the report concluded:

The amazing diversity of what have been classified as small, private, liberal arts colleges is described in Chapter IV. It appears that both the Carnegie Commission classification and the HEGIS classification 3.2 (Private Liberal Arts Colleges II) are much too large. They really encompass all those colleges not suitably classified elsewhere

The weakness of the classification system and the shortcomings of the data create many problems in analyzing the colleges' contribution as a national resource, in identifying critical indicators of institutional pathology, and in considering possible strategies that might preserve colleges that are making a significant contribution to higher education as a natural resource There is a remarkable lack of current, reliable, and specific information on the above (Andrew and Friedman, 1976, pp. I. 11-I. 12).

The heterogeneous nature of this group of private liberal arts colleges was also noted by Dr. William A. Shoemaker, Vice President for Research, Council for the

Advancement of Small Colleges. In an interview on November 30, 1976 Dr. Shoemaker noted problems with the Liberal Arts Colleges II category for conducting fiscal research. He stated:

It is a fact that most of the colleges that I have to serve are those that are in the Liberal Arts College II category, and that's where the Carnegie classification system breaks down because it is nothing but a miscellaneous catch-all category. So far as I'm concerned, the fiscal analysis for colleges within this category is virtually useless. Now if you can help these colleges identify fiscal factors that helps them describe themselves either as an individual institution or in comparison to other institutions, then you will have done something that is worthwhile. These schools realize that they must manage themselves better, but they need fiscal comparative data as an aid.

In addition, fiscal analyses of the Liberal Arts Colleges II category are actually misleading and often damaging for national policy considerations. This category is virtually useless because it is disfunctionally based on the impressions of a few people in another era and on inadequate data (Interview, November 30, 1976).

In sum, the need for further refinement of the Liberal Arts Colleges II category was apparent.

PURPOSE OF THE STUDY

The purpose of this study was to seek to answer the following research question:

Are there sub-categories of private institutions within the Liberal Arts Colleges II category that better describe the fiscal characteristics of these colleges?

This major research question addressed by this study was stated in the form of a null hypothesis:

There are no sub-classifications of private colleges classified as Liberal Arts Colleges II in terms of their fiscal characteristics.

The research design has been addressed more specifically in Chapter III of this study. Generally, twelve fiscal figures covering revenue, expenditure, and endowment categories were selected for each of the 499 private institutions in this study. These twelve dollar values were then divided by the full-time-equivalent student enrollment of each institution in order to obtain fiscal data weighted on a per student basis for each college. Once all the data were calculated, several analyses were performed using: (1) the computer program Normix Cluster Analysis to test for sub-categories of institutions, and (2) a series of computer programs developed to provide descriptive data for each sub-group. These procedures are discussed in detail in Chapter III.

LIMITATION OF THE STUDY

The reader must be cautioned about the use of the results of this study because of problems associated with the accuracy of the service data extracted from the Office of Education computer tape. Editing procedures revealed that apparently some colleges did not follow the instructions for reporting this fiscal data. This problem was also observed by Andrew and Friedman (1976).

The taxonomy developed in this study was based exclusively on financial data. This single orientation of the system may be a major limitation because other important factors such as student characteristics are excluded. For example, data such as family income of students, attitudes of students, ethnic mix of students, and religious mix of students may be important factors for the classification of these private colleges.

Finally, the reader should remember that the development of computerized cluster analysis techniques is still in its infancy. The rapidly developing science of computerized analysis may perfect at some future date a more powerful system than NORMIX.

DEFINITION OF TERMS

Important terms were identified and defined to insure the existence of common understandings throughout this study. After establishing a common definition of private Liberal Arts Colleges II, institutional characteristics and financial variables were defined.

Private Liberal Arts Colleges II

The Carnegie classification system divides liberal arts colleges into Liberal Arts Colleges I and II. Category II is essentially a residual category, composed of those institutions which are not doctoral-granting nor comprehensive universities and colleges and which also do

not meet the criteria for inclusion in the Liberal Arts Colleges I category. There are many similarities between the categories Liberal Arts Colleges I and II, but the major distinction between them, on which the Carnegie judgement is primarily based, is selectivity of students.

Institutions classified as Liberal Arts Colleges I are termed "elite" and require a combined Scholastic Aptitude Test (SAT) score of 1075 or above for admission. Liberal Arts Colleges II institutions are as a group far less stringent in their admission standards. Although they accept highly qualified students, the general level of SAT scores is below 1074. For the purposes of this study, the institutional population of private Liberal Arts Colleges II number 499 (see Appendix A for listing).

Institutional Characteristics

The institutional characteristics data were collected from the HEGIS reporting system for fiscal year (FY) 1974. The data were provided on a computer tape of the HEGIS Financial Statistics of Institutions of Higher Education 1974.

Region Distribution. This characteristic classifies institutions according to the following nine geographic regions:

1. New England
2. Mid West
3. Great Lakes
4. Plains
5. Southeast
6. Southwest
7. Rocky Mountains
8. Far West
9. Outlying Areas

Race of Students. This characteristic classifies institutions according to the predominant race of the student body as either white or negro.

Institutional Type. This characteristic classifies institutions according to the traditional taxonomy used by the Office of Education. Colleges and universities are classified as either university, other four-year, or two-year.

Sex of Students. The institutional student bodies are classified by four categories: male, female, coeducational, or coordinate. The term coordinate refers to institutions that are primarily single sex institutions but have a shared arrangement with another institution in order to provide a coeducational experience to its students, or to enhance the range of academic offerings available to its students.

Highest Level of Offering. This characteristic reports the highest degree offered by an institution in the following six categories:

- | | |
|---------------------------|--------------------|
| 1. 2, Less Than 4 | 4. Masters |
| 2. 4-5 Year Baccalaureate | 5. Less Than Ph.D. |
| 3. 1st Professional | 6. Doctorate |

Full-Time-Equivalent Students. This characteristic is a statistical process for equating the academic loads of part-time students to that of full-time students. The enrollment figure is calculated by dividing the total part-time

enrollment by three and adding the quotient to the total full-time enrollment.

Financial Variables. All measures for the twelve financial variables were derived from the HEGIS reporting system for FY 1974 as defined in Financial Statistics for Institutions of Higher Education 1974 (Vignone and Novalis, 1974).

Revenue Source Variables:

1. Total Educational and General Revenue was defined as the total revenue received from the following sources: student tuition and fees; governmental appropriations; endowment income; private gifts; sponsored research; other separately budgeted research; other sponsored programs; recovery of indirect costs; sales and services of educational departments; organized activities related to educational departments; and other sources.
2. Student Tuition and Fees Revenue was defined as the total revenue received from all tuition and fees assessed against students for educational and general purposes.
3. Private Gifts Revenue was defined as the total of all funds given to the institution by any non-governmental source.
4. Student Aid Revenue was defined as the sum of all income received for financing grants, scholarships, and fellowships for students for which no service or repayment was required of the students.

5. Total Auxiliary Enterprises Revenue was defined as the total of all income received from the operation of housing and food services, student unions, intercollegiate athletics, and other activities which furnished a service to students, faculty, or staff, and for which a fee was charged to cover the cost of the service.

6. Total Current Funds Revenue was defined as all funds received from educational and general sources; student aid sources; major service programs; and all auxiliary enterprise sources.

Expenditure Variables:

1. Total Educational and General Expenditures was defined as the total expenditures for the following categories: instruction and departmental research; organized activities related to educational departments; sponsored research; other separately budgeted research; other sponsored programs; extension and public service; libraries; physical plant maintenance and operation; and other educational and general.

2. Instruction and Departmental Research Expenditures was defined as the total expenditures of all departments, colleges, schools and instructional divisions of the institution.

3. Student Aid Grants Expenditures was defined as all expenditures for student aid grants, scholarships, and fellowships to students for which no service or repayment was required of the students.

4. Total Auxiliary Enterprises Expenditures was defined as the total expenditures for the operation of housing and food services, student unions, intercollegiate athletics, and other activities which furnished a service to students, faculty, or staff, and for which a fee was charged to cover the cost of the service.

5. Total Current Funds Expenditures was defined as all expenditures for educational and general expenditures; student aid grants; major service programs; and auxiliary enterprises.

Endowment Funds:

1. Ending Market Value of Endowment was defined as the value of the endowment at the end of the fiscal year. This adjusted figure is shown usually in the footnotes of an annual financial report in order to more accurately reflect the current worth of assets previously recorded at book value.

SUMMARY

Private institutions of higher education and especially private colleges classified according to the Carnegie Commission taxonomy as Liberal Arts Colleges II have been the subject of much research designed to reveal insight into the financial problems of this sector of higher education. Some researchers currently are questioning the validity and reliability of some of this research because of the ambiguity of the category "Liberal Arts II." The heterogeneous nature of this group of colleges has prompted some researchers to maintain that generalizations about the financial status of this group of colleges are inaccurate and misleading. Recognizing the need for a more definitive taxonomy for the private institutions currently classified as Liberal Arts Colleges II, this study was designed to contribute to the solution of this critical problem in higher education.

The review of literature in Chapter II was directed at documenting and evaluating current financial studies dealing with private colleges and reviewing literature about methods and procedures of taxonomy construction.

The research design and the statistical treatment of the data were presented in Chapter III.

The analyses of the data and results of the statistical treatment were presented in Chapter IV.

Finally, a summary of the research, conclusions, implications, and recommendations for further research based upon the results of this study were presented in Chapter V.

Chapter II

REVIEW OF RELATED LITERATURE

INTRODUCTION

Throughout the late 1960's and early 1970's, the "financial crisis" in the collegiate sector has been the subject of a substantial number of studies. In recent years, many of these reports have contained conclusions that were in conflict with the findings of other studies. The issue seems to be far from settled. Some investigators are questioning the research methodology used in some reports dealing with institutions classified as "Liberal Arts Colleges II" because of the ambiguity of this label.

A definitive taxonomy of institutions is basic to any research on the various components of higher education. Two basic classification systems are generally used in most reports; one developed by the National Center for Educational Statistics and the other constructed by the Carnegie Commission on Higher Education. The Carnegie system is the more definitive of the two; however, even this taxonomy has some problem areas.

The discussion in this chapter was designed to accomplish three objectives: (1) to survey recent financial studies dealing with the issue of "financial crises"

in higher education generally and the private Liberal Arts Colleges II specifically, (2) to reflect the conflicting opinions and conclusions of many of the current studies, and (3) to review current literature dealing with taxonomy development.

FINANCIAL STUDIES IN HIGHER EDUCATION

Concern over the financial distress of colleges and universities is not of recent origin. In 1947, the President's Commission on Higher Education was established to address this issue. President Eisenhower appointed two commissions during his administration to investigate various aspects of the topic. A substantial number of reports continued to discuss the question throughout the late 1960's and 1970's.

In 1970 Hans Jenny and Richard Wynn's The Golden Years (1970), using longitudinal data from the period 1960-1968 for a sample of 48 private liberal arts colleges, concluded that this sector of higher education might be in financial trouble. The authors noted that they had found wide variations among the individual institutions in this study.

William Jellema, in The Red and the Black (1971), reported that a significant number of the private colleges he had studied were facing serious operating deficits.

The statistical profile used in this book was developed using averages, i.e. the statistical composite of the sample institutions.

Appearing about the same time as Jellema's book was Cheit's The New Depression in Higher Education. Cheit reported that financial distress was widespread among both public and private colleges and universities. The conclusions of the report were based on a very small sample, 41 institutions. Included in the sample were 14 private liberal arts colleges, or less than three percent of the total number of private liberal arts colleges.

Not all expert voices concluded that a condition of serious financial distress existed among the collegiate institutions. Alice Rivlin, principal author of Toward a Long-Range Plan for Federal Financial Support for Higher Education, testified before Congress in 1971 that her study had uncovered no general financial crises of higher education. She stated:

My own impression from available studies and conversations with higher educators is that there is no general crises of higher education finance. Rather, there are several sets of factors affecting various kinds of institutions in various ways at the same time, some permanent and some temporary (Rivlin, Hearing, 1971, p. 776).

Columbia Research Associates made a similar conclusion, but were even more blunt in their statement. For the period 1967-68 to 1969-70, the report, The Cost of College (1971) contained the following statement:

It is necessary to conclude that colleges financial well-being has not significantly worsened In summary, we cannot support the conclusions elsewhere (Jenny, Cheit, Jellema) that higher education in general is facing a discouragingly bleak financial future (pp. 33, 37).

In his follow-up report, From Red to Black?, (1973), Jellema re-presented his data and concluded:

. . . . while finances appear generally better in the short run, the prospects show no significant improvement in the long run (p. 28).

Cheit in his own follow-up, The New Depression in Higher Education: Two Years Later, (1973), found a "fragile stability" for the present, but agreed with the more pessimistic long-range evaluation offered by Jellema.

In 1973, The National Commission on Financing Post-secondary Education was established in part to clarify the fuzzy financial distress issue. The Commission's report contained the following assessment of previous studies of the problem:

In short, there has been a substantial number of reports issued during the past six years dealing directly or indirectly with the question of financial distress among collegiate institutions. Those who have studied the matter are far from unanimous, however, about the seriousness of the problem and the necessity for governmental intervention (1973, p. 193).

The National Commission's report also arrived at an unfavorable methodological diagnosis of these earlier studies. The Commission stated:

Of special significance is the fact that the literature provides clear evidence that there is not agreement on a uniform definition

regarding the nature of financial distress among postsecondary institutions, nor are there generally accepted standards or uniform criteria to ascertain its existence or extent (1973, p. 193).

In October of 1975, Lyle H. Lanier and Charles G. Anderson issued a report entitled, A Study of the Financial Condition of Colleges and Universities: 1972-1975. About the same time, Howard Bowen and John Minter published their study, Private Higher Education, First Annual Report on Financial and Educational Trends in the Private Sector of American Higher Education (1975). The tenors of the conclusions of the two reports differ. The Lanier-Anderson study indicates conditions are "deteriorating," while the Bowen-Minter report indicates that conditions are "improving."

The American Council on Education reviewed the two reports and concluded that the grouping of the institutions contained in each report's sample was likely to account for some of the apparent differences in findings (1976). The Lanier-Anderson report used a sample of 190 colleges and universities selected from four categories of the Carnegie classification system. The sample of 190 contained 78 private colleges in the Liberal Arts Colleges II category; this represented 14.3 percent of all private colleges in the classification. The authors noted that the 14 percent level was "unsatisfactorily low." The Bowen-Minter study contained a sample of 100 institutions of which only 34 were classified as Liberal Arts Colleges II. In light of the

findings of more recent research (Andrew and Friedman, 1976) it is likely that the small representation of colleges from this category contributed to the conflicting conclusions of the two reports.

In May of 1976, Loyd D. Andrew and Burton D. Friedman in their study, A Study of the Causes for the Demise of Certain Small, Private, Liberal Arts Colleges in the United States, concluded that a condition of financial distress existed at a number of private institutions within the Carnegie classification of Liberal Arts Colleges II. The report also concluded that the existing category of Liberal Arts Colleges II was not adequate. The authors stated:

The amazing diversity of what have been classified as small, private, liberal arts colleges is described in Chapter IV. It appears that both the Carnegie Commission classification and the HEGIS classification are much too large. They really encompass all those colleges not suitably classified elsewhere (1976, p. I. 13).

In reviewing the conflicting conclusions of past studies, the report states:

These differences of opinion are generally based on the general perspective taken by the analyst. Depending on which institutions one uses and which financial statistics are extracted, a varying view of financial distress emerges (1976, p. II. 67).

In summary, many studies have been conducted to investigate the financial distress of institutions of higher education, especially private colleges classified as Liberal

Arts Colleges II. These reports have often reached conflicting conclusions and the question still is not completely answered. The need for the development of a more definitive taxonomy for the category of private Liberal Arts Colleges II has been recommended. This suggestion may be a key to improved future financial research for this sector of higher education.

TAXONOMY CONSTRUCTION

One of the most common activities of man has been the sorting of like things into categories. The process of classification or act of assigning a new item to its proper place in an established set of categories is generally possible when: (1) the essential attributes of each category are known, (2) the number of new items to be classified is small, and (3) the number of variables used is minimized (Anderberg, 1973). For example, colleges have for years classified student bodies by class (freshman, sophomore, etc.) and sex (male or female). This classification generally can be accomplished at each college because the enrollment count is not extremely large, the number of variables involved is limited, and a substantial amount of the structure of the classification system is believed to be known a priori, i.e. freshmen, sophomores, male, female, etc. Systems used to classify institutions of higher education have generally met the three characteristics just cited.

The classification system developed by the National Center for Educational Statistics grouped institutions according to three categories: (1) universities, (2) four-year colleges, and (3) two-year colleges. In addition, each school was classified as either public or private.

The Carnegie Commission on Higher Education developed its own classification system of institutional types for its enumerative and analytical purposes. This classification was set forth in the Carnegie Commission report entitled New Students and New Places (1971). This system was suggestive of the variety and dispersion of higher education institutions in the United States and was more definitive than the system used by the National Center for Educational Statistics. However, as noted earlier in this study, more recent research has identified problems with the system, especially for the category, Liberal Arts Colleges II.

This weakness has hampered financial research of individual institutions and groups of colleges with similar financial characteristics. The deficiency of the Carnegie system was recognized by John D. Millett shortly after the publication of the Carnegie Commission's report (1971).

Millett observed:

Moreover, the classification has only one primary utility. It provides an indication of what kinds of institutions with which experiences might usefully be analyzed or compared. The experience of all higher education institutions as a whole means very

little. It is the experience of institutions with similar characteristics which may be meaningful.

This classification by no means provides a full indication of the various characteristics of institutions of higher education. It is only the beginning in the search for common attributes and common experiences (Irwin, 1973, pp. 14-15).

Millett also stated that the Carnegie classification system did incorporate some helpful descriptive data. Specifically he noted the usefulness of type of control data (public and private), enrollment data, and location data (Irwin, 1973).

Thus the Carnegie system does provide a structure for classifying institutions by type of mission, type of control, location of institution, and by enrollment size. The structure of this classification system is assumed to be known a priori, i.e. before examination or analysis of the data and based on theory instead of experience or experimentation. In short, the system was developed rationally, not objectively. The Carnegie system, formulated using the rational approach, did provide a good base for continued development of a more complete classification system. To expand the knowledge of this effort, a more efficient and effective method was needed for the refinement of the Carnegie system. This was especially true if more variables were to be included in the classification system development process.

The purpose of this study was to develop a more adequate financial taxonomy of private colleges classified in the Carnegie system as Liberal Arts Colleges II. Two considerations confronting the research design of this study surfaced immediately: (1) how to handle a large number of variables?, and (2) how to develop the taxonomy as objectively as possible?

A review of the literature concerning classification system construction revealed that most of the early work was in the fields of biology and zoology, where it was generally known as taxonomy. Initially taxonomy was more of an art than a scientific method. The development of mathematical approaches to taxonomy construction was impeded for years because of the enormous amount of time required to make numerous involved mathematical calculations. With the widespread availability of large electronic computers during the mid 1960's to take the burden of the very large amounts of computations generally involved, mathematical techniques for taxonomy construction were greatly enhanced. One of these new procedures was cluster analysis, a technique which attempted to go beyond the intuitive judgments of a human classifier.

In general, cluster analysis consists of (1) calculating the "similarities" or "distances" between variables and (2) grouping similar observations together into classification categories. The operational objective is to dis-

cover a category structure which fits the observations. The problem is sometimes stated as one of finding the "natural groups." The essence of cluster analysis is to sort the observations into groups such that the degree of "natural association" is high among members of the same group and low between members of different groups.

Classification systems such as the Carnegie system assume that the essential attributes of each category are known a priori. The operational objective of this type of system is to classify new observations, that is, recognize them as members of one category or another. In cluster analysis little or nothing is known about the category structure.

Sobal and Sneath (1963) identified the aims of numerical taxonomy as repeatability and objectivity. They stated that numerical taxonomy incorporated the ideas of the scientific method because the procedure could be repeated to produce the same results. The concept of objectivity challenges the methodology use in rationally developed systems such as the Carnegie system. Sobal and Sneath concluded:

By including many characteristics without previous arbitrary selection or elimination, and by providing standard methods of processing the data and evaluating the results, we reduce subjective bias and hence increase objectivity. Objectivity and repeatable procedures should together lead to very stable taxonomies, which are unlikely to be overthrown by later discoveries (1963, pp. 49-50).

In order to maximize the objectivity of the financial taxonomy of private Liberal Arts Colleges II institutions, it was decided that a large number of financial variables would be used. These variables are presented in Table II according to their organization in the HEGIS financial survey (See Table II, p. 40).

Clustering techniques have been used in a number of fields in addition to the natural sciences. For example, Morrison (1967) used the technique in the field of market research. A large number of cities were available to be used as test markets, but due to economic factors testing had to be restricted to a small number of these cities. By clustering the cities into a small number of groups, containing within each group cities that were similar to each other, one city from each group was used as a test market. This provided full coverage at a reduced cost. Green (1967) adopted this approach to classify 88 cities on the basis of 14 variables such as city, size, newspaper circulation, per capita income, etc.

Cluster analysis is not a completely objective technique. The choice of the variables reflects the investigator's judgment of relevance for the purpose of the classification. It is important to select variables that are meaningful to the type of classification desired. For example, if a classification of automobiles is sought for the purpose of investigating gas mileage, it is generally

not sensible to include such variables as color or type of radio since it is not likely that these variables will produce a meaningful classification. Brian Everitt noted the importance of variable selection:

It is important to bear in mind that the initial choice of variables is itself a categorization of the data which has no mathematical or statistical guidelines, and which reflects the investigator's judgement of relevance for the purpose of the classification (this of course could also be said of the entities chosen for study) (1974, p. 48).

As noted earlier in this chapter, the cluster analysis approach determines the similarity of the items to be grouped based on a "distance" measurement between variables, i.e. the more similar the variables, the lower the value for the distance measurement. The measurements for all variables compose a single index of similarity. The value of each variable to the total composite depends on its scale of measurement and that of the other variables as well. As Anderberg noted:

The choice between grams and tons on one variable may be difficult enough, but when added to the choice between inches and miles on another it becomes not only a matter of relative weighting but one of finding meaning in the sum of diverse units (1973, p. 13).

To obtain a meaningful and consistent measurement of the variables, each financial variable was divided by the fall 1973-74 full-time-equivalent degree credit student enrollment to produce a weighted dollar measurement for each variable by the enrollment of the institution. This approach

was also selected because other researchers have used per full-time-equivalent financial figures as a unit of measurement (Jellema, 1973; Jenny and Wynn, 1970; Cheit, 1971; National Commission on Financing Postsecondary Education, 1973; Lanier and Anderson, 1975; Bowen and Minter, 1975).

There are a number of types of cluster analysis available today. This review of literature concerning cluster analysis provided a general introduction about what cluster analysis does and how the clusters are formed. For a detailed methodology of cluster analysis and numerical taxonomy the reader is referred to the comprehensive work of: Sobal and Sneath (1963), Fisher (1968), Cole (1969), Anderberg (1973), and Everitt (1974).

For this study, John H. Wolfe's (1967) NORMIX system was selected. NORMIX is an acronym for Computational Methods for Estimating the Parameters of Multivariate Normal Mixtures of Distributions. The NORMIX technique was published by the United States Personnel Research Activity in San Diego, California, (Wolfe, 1967) and is available for unlimited distribution. In addition, NORMIX is discussed by Anderberg (1973) and Everitt (1974).

SUMMARY

A review of the related literature revealed that many studies have been conducted on the financial "crises" of institutions of higher education and especially private colleges classified as Liberal Arts Colleges II. The conclusions of the reports were often conflicting and presented a confusing picture of the situation. Later research revealed the need for a more definitive taxonomy for the Liberal Arts Colleges II institutions.

After reviewing the literature concerning taxonomy construction, the researcher concluded that the Carnegie classification system has added to the knowledge of taxonomy development for institutions of higher education. However, because the system was developed rationally rather than objectively, several limitations and weaknesses of the system exist.

The need for a more definitive taxonomy of the private colleges classified by Carnegie as Liberal Arts Colleges II provided the stimulus for this study. It was decided that Wolfe's NORMIX cluster would be used for this taxonomy construction and that a wide range of financial variables would be included to enhance the objectivity of the taxonomy.

Finally, the literature revealed the general use of per full-time-equivalent student financial figures for comparative purposes. This approach had two advantages:

(1) all variables would be a consistent unit of measurement, and (2) the financial variables would be weighted according to institutional enrollment.

The need for refinement of the Carnegie category of private Liberal Arts Colleges II provided the stimulus for this study; the promise of modern taxonomy techniques supplied the excitement to motivate the investigation.

Chapter III

METHODS AND PROCEDURES

The purpose of this study was to determine the fiscal sub-classifications of private institutions within the Liberal Arts Colleges II category. A discussion of the population, variables, ratios, and statistical analysis utilized in the design of this study is presented in the chapter.

THE POPULATION

All 499 private colleges classified according to the Carnegie Commission's classification system as Liberal Arts Colleges II which were in operation during fiscal year 1973-74 and reported fiscal data to the National Center for Educational Statistics constituted the population for this study. The Higher Education General Information Survey (HEGIS) as published by the National Center for Educational Statistics provided the source of financial data utilized for data collection. A computer tape of HEGIS "Financial Statistics of Institutions of Higher Education for Fiscal Year Ending 1974," was utilized for the collection of revenue, expenditure, and endowment, full-time-equivalent enrollment (fall 1973-74), location, race of students, sex of students, and higher level of degree offerings data.

FINANCIAL VARIABLES

Twelve financial variables were selected from fiscal data collected from a tape of HEGIS "Financial Statistics of Institutions of Higher Education for Fiscal Year Ending 1974." This data selection was made consistent with the recommendations of the "Panel of Experts" (Andrew and Friedman, 1976). These twelve fiscal variables were selected from three sections of the HEGIS financial questionnaire: (1) Part A--Current Funds Revenue; (2) Part B--Current Funds Expenditures, and (3) Part E--Endowment. A classification list of the variables is shown in Table II on the following page.

A computer program was written to divide each revenue, expenditure, and endowment variable by the fall 1973-74 full-time-equivalent student enrollment for each of the institutions. The resulting twelve per FTE financial ratios formed the data base for the NORMIX analysis. The financial variables were reduced to per FTE ratios because they are ratios commonly used in higher education financial analyses (Lanier and Anderson, 1976; Jellema, 1973; The National Commission on the Financing of Postsecondary Education, 1973; The Carnegie Commission on Higher Education, 1971).

The twelve fiscal ratios utilized in this study are reported in Appendix B and C for each of the 499 colleges. The following ratio definitions were adopted from financial

TABLE II

A CLASSIFICATION OF THE VARIABLES OF
FINANCIAL DATA FOR FISCAL 1974
INCLUDED IN THIS STUDY

A. Current Funds Revenue

- I. Total Educational and General Revenue
 - 1. Student Tuition and Fees Revenue
- II. Private Gifts Revenue
- III. Student Aid Revenue
- IV. Total Auxiliary Enterprises Revenue
- V. Total Current Funds Revenue

B. Current Funds Expenditures

- I. Total Educational and General Expenditures
 - 1. Instruction and Departmental Research Expenditures
- II. Student Aid Grants Expenditures
- III. Total Auxiliary Enterprises Expenditures
- IV. Total Current Funds Expenditures

C. Endowment Funds

- I. Ending Market Value of Endowment

variable definitions developed by Vignone and Novalis (1974).

Revenue Source Ratios:

1. Total Educational and General Revenue was measured by deriving the amount of income per full-time-equivalent student provided each institution through the collection of educational and general funds.
2. Student Tuition and Fees Revenue was measured by deriving the amount of income per full-time-equivalent student provided each institution through the collection of student tuition and fees.
3. Private Gifts Revenue was measured by deriving the amount of income per full-time-equivalent student provided each institution through the receipt of private gifts.
4. Student Aid Revenue was measured by deriving the amount of income per full-time-equivalent student provided each institution through the receipt of funds for student aid.
5. Total Auxiliary Enterprises Revenue was measured by deriving the amount of income per full-time-equivalent student provided each institution through the collection of fees received from the operation of auxiliary enterprises.

6. Total Current Funds Revenue was measured by deriving the amount of income per full-time-equivalent student collected from all current fund revenue sources.

Expenditure Ratios:

1. Total Educational and General Expenditures are measured by deriving the amount expended per full-time-equivalent student for educational and general purposes.

2. Instruction and Departmental Research Expenditures was measured by deriving the amount expended per full-time-equivalent student for instruction and departmental research purposes.

3. Student Aid Grants Expenditures was measured by deriving the amount expended per full-time-equivalent student for student aid purposes.

4. Total Auxiliary Enterprises Expenditures was measured by deriving the amount expended per full-time-equivalent student for the operation of auxiliary enterprises.

5. Total Current Funds Expenditures was measured by deriving the amount expended per full-time-equivalent student for current fund purposes.

Endowment Ratio:

1. Ending Market Value of Endowment was measured by deriving the amount of reserves per full-time-equivalent student in endowment funds priced at the ending market value.

STATISTICAL ANALYSES

Twelve financial variables for each institution were divided by the full-time-equivalent student enrollment to obtain a value based on the enrollment size of each institution. These ratios then established a computational base for the study. This file is presented in Appendix B and C.

One of the great plagues of empirically structured research is missing data. Fortunately, the computer tapes of the HEGIS financial survey contained complete data. Certain information was reported as zero for some colleges. In many cases it is not appropriate to code missing data as zero because this action may give a serious bias to the results. However, for this study, zero value for the variables was included since the data actually had a value of zero and therefore represented a true characteristic of the college.

A brief review of cluster analysis indicated enormous computational effort. Therefore, any real life problem in numerical taxonomy is computer dependent. The cluster analysis utilized in this study of 499 colleges was performed at the Computer Center of Virginia Polytechnic Institute and State University on a IBM 370 system equipped with dual 158 processors.

The NORMIX cluster analysis was selected for this study. This method assumes the data set is a mixture of

multivariate normal distributions. Therefore, the objective is to find the partition which maximizes the likelihood function. The user can specify several different guesses for the number of clusters and the system will find a partition for each such guess (Anderberg, 1973).

The NORMIX cluster analysis was especially suited for this study. In fact, this application was one of the recommendations of Wolfe. He stated:

An information system can be no better than the classification or indexing system it employs. Almost all classification systems in current use have been developed from the intuitive conceptual judgements of human beings. It seems likely that these judgements could be improved upon or extended by statistical techniques which search for underlying types of relatively homogeneous content. Normix is just such a technique (1967, p. 22).

One of the major advantages of the NORMIX system is that it allows the investigator to use a large number of variables in the clustering process. This additional flexibility may increase the objectivity of the resulting taxonomy since the researcher may elect to use a large number of variables and thus minimize the subjective influence of variable selection.

A substantial problem in performing cluster analysis is deciding on the number of clusters in the data. In practice, this decision is made usually by the investigator and is based on the experience with the cluster method and the data set under study. Anderberg noted the existence of this problem and stated:

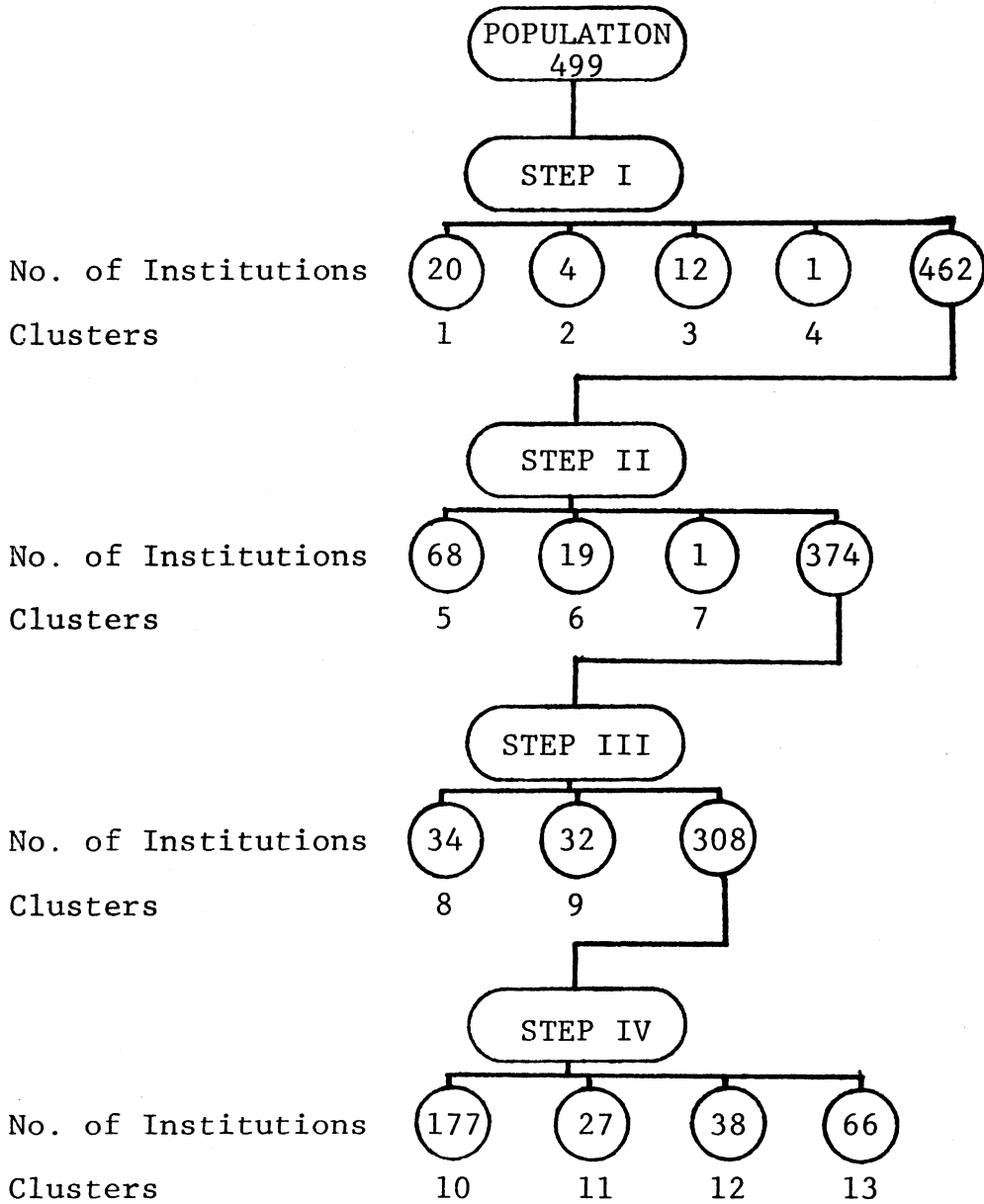
The literature contains a lot of wishing for mechanical methods of determining the number of groups. It can be a difficult choice. Some investigators seem to have a preoccupation with an "optional" number of groups, usually in conjunction with a search for a single "best" classification scheme for the data set. The possibility of several alternative classifications, each reflecting a different aspect of the data, is rarely entertained (Anderberg, 1973, p. 15).

The data were submitted to the NORMIX cluster analysis four times. Each time, the program instructions requested six clusters; however, only three or four clusters were usually produced because of the large variance in the data. It was therefore necessary to re-submit the largest cluster to refine the taxonomy. The discriminant values produced by NORMIX at the end of each run were inspected to determine the stopping point of the clustering process. Once this decision to stop was made, the largest cluster of the fourth run (177 institutions) was re-submitted to test the homogeneity of the cluster. An inspection of the discriminant values for this test run reinforced the decision to stop at four runs. A summary of the clustering procedure is presented in Table III.

Once the clusters had been established by the NORMIX system, each institution was listed according to its group membership. In addition, the Federal Interagency Committee on Education (FICE) identification code, institutional name, institutional location, and fall 1973-74 full-time-equivalent student enrollment were included with

TABLE III

PROCEDURE FOR CLUSTER ANALYSES
CONDUCTED FOR THIS STUDY



each institution in each cluster. The cluster membership is presented in Appendix A.

In order to review the financial characteristics for each cluster and make comparisons with the population averages, the mean values for each financial ratio were printed in Tables IV and V. Conclusions were then drawn from inspection of this mean data.

Several additional descriptive financial ratios were calculated for each cluster. These ratios provided another gauge in evaluating the cluster's characteristics to the population averages. The ratios are presented in Table VI.

Next, characteristic data were presented for each cluster according to the following categories: (1) regional distribution; (2) race of students; (3) sex of students; (4) highest level of offering; and, (4) FTE students. These data provided additional information about the population and each cluster.

SUMMARY

The population for this study consisted of 499 private institutions classified as Liberal Arts Colleges II. Revenue, expenditure, and endowment data were collected for each institution from a tape of the Higher Education General Information Survey (HEGIS) "Financial Statistics of Institutions of Higher Education for Fiscal Year Ending

1974." The number of full-time-equivalent students and characteristic data were collected from the same tape.

The data were analyzed using the NORMIX cluster analysis and the institutional membership of each cluster was listed. The mean values for each of twelve fiscal ratios, several additional descriptive financial ratios, and characteristic data were presented in tables. These data were then inspected to evaluate the financial characteristics of each cluster and compare each cluster's financial profile to that of the entire population of 499 colleges.

Chapter IV

PRESENTATION OF RESULTS

Data were collected and analyzed for 499 private colleges classified by Carnegie as Liberal Arts Colleges II to determine if there were any fiscal sub-classifications of private institutions within this category. Twelve financial variables were selected from the HEGIS fiscal data for FY 1974 and divided by the fall 1973-74 FTE enrollment of each college. The fiscal data expressed as per FTE student financial ratios then reflected the enrollment size of each institution. The per FTE financial ratios were analyzed by the NORMIX cluster analysis to determine if the sub-classifications of colleges existed. The results of this analysis will be reviewed on the following pages.

RESULTS OF NORMIX ANALYSIS

The NORMIX cluster analysis categorized the population of 499 colleges into 13 clusters. The institutional membership of each cluster is presented in Appendix A. The mean values for each of the 12 financial ratios is presented for each cluster and the population in Table IV. These mean values are presented in Table V as an index to the means for the entire population which is based at 1.00. Other characteristic data for each cluster and the population

TABLE IV

PER F.T.E. STUDENT MEANS OF TWELVE
FINANCIAL RATIOS FOR THIRTEEN
CLUSTERS AND THE POPULATION

	NO. COL.	EDUCATIONAL AND GENERAL REVENUE	STUDENT TUITION AND FEES REVENUE	PRIVATE GIFTS REVENUE	STUDENT AID REVENUE	TOTAL AUXILIARY ENTERPRISES REVENUE	TOTAL CURRENT FUNDS REVENUE
Cluster 1	20	\$ 3700	\$1296	\$ 2029	\$247	\$ 685	\$ 4272
Cluster 2	4	4407	936	833	375	665	5447
Cluster 3	12	3352	1325	1784	807	967	4978
Cluster 4	1	81837	1240	11598	0	0	81838
Cluster 5	68	2790	1636	610	173	878	3821
Cluster 6	19	5055	1200	3044	558	1353	6793
Cluster 7	1	60	60	168	223	825	60
Cluster 8	34	2809	1868	561	105	725	3571
Cluster 9	32	2989	1195	632	431	672	4064
Cluster 10	177	2406	1709	482	165	772	3340
Cluster 11	27	3128	1450	1332	223	923	4265
Cluster 12	38	2500	1741	461	444	565	3509
Cluster 13	66	2606	1958	285	150	1021	3774
Population	499	2942	1645	743	241	826	3964

TABLE IV (CONTINUED)

PER F.T.E. STUDENT MEANS OF TWELVE
FINANCIAL RATIOS FOR THIRTEEN
CLUSTERS AND THE POPULATION

	NO. COL.	TOTAL EDUCATION AND GENERAL EXPENDITURES	INSTRUCTION AND DEPARTMENTAL RESEARCH EXPENDITURES	STUDENT AID GRANTS EXPENDITURE	TOTAL AUXILIARY ENTERPRISES EXPENDITURES	TOTAL CURRENT FUNDS EXPENDITURES	ENDING MARKET VALUE OF ENDOWMENT
Cluster 1	20	\$ 3422	\$ 1573	\$238	\$ 900	\$ 4243	\$ 4181
Cluster 2	4	4140	1514	494	1131	5641	73530
Cluster 3	12	2965	139	926	966	4699	779
Cluster 4	1	42410	13427	0	50654	93064	0
Cluster 5	68	2651	1178	373	854	3886	6230
Cluster 6	19	4461	1781	828	1331	6464	897
Cluster 7	1	67	32	603	817	66	1658
Cluster 8	34	2935	1187	276	648	3842	686
Cluster 9	32	2847	1072	515	650	4019	825
Cluster 10	177	2292	1023	318	724	3332	1115
Cluster 11	27	3057	1171	303	753	4125	1210
Cluster 12	38	2470	1049	539	550	3556	2065
Cluster 13	66	2577	1057	281	989	3834	737
Population	499	2748	1151	377	895	3994	2654

TABLE V

PER F.T.E. STUDENT MEANS OF TWELVE
FINANCIAL RATIOS BASED ON AN INDEX
OF 1.00 FOR THE POPULATION, FOR
EACH OF THE THIRTEEN CLUSTERS

	NO. COL.	EDUCATIONAL AND GENERAL REVENUE	STUDENT TUITION AND FEES REVENUE	PRIVATE GIFTS REVENUE	STUDENT AID REVENUE	TOTAL AUXILIARY ENTERPRISES REVENUE	TOTAL CURRENT FUNDS REVENUE
Cluster 1	20	1.26	.79	2.73	1.03	.83	1.08
Cluster 2	4	1.50	.57	1.13	1.56	.81	1.38
Cluster 3	12	1.14	.81	2.41	3.35	1.17	1.26
Cluster 4	1	27.82	.76	15.61	.00	.00	20.65
Cluster 5	68	.95	1.00	.82	.72	1.07	.97
Cluster 6	19	1.72	.73	4.10	2.32	1.64	1.72
Cluster 7	1	.02	.04	.23	.92	1.00	.02
Cluster 8	34	.96	1.14	.76	.44	.88	.90
Cluster 9	32	1.02	.73	.85	1.79	.82	1.03
Cluster 10	177	.82	1.04	.65	.69	.94	.85
Cluster 11	27	1.07	.89	1.80	.93	1.12	1.08
Cluster 12	38	.85	1.06	.62	1.85	.69	.89
Cluster 13	66	.89	1.19	.39	.63	1.24	.96
Population	499	1.00	1.00	1.00	1.00	1.00	1.00

TABLE V (CONTINUED)

PER F.T.E. STUDENT MEANS OF TWELVE
FINANCIAL RATIOS BASED ON AN INDEX
OF 1.00 FOR THE POPULATION, FOR
EACH OF THE THIRTEEN CLUSTERS

	NO. COL.	TOTAL EDUCATION AND GENERAL EXPENDITURES	INSTRUCTION AND DEPARTMENTAL RESEARCH EXPENDITURES	STUDENT AID GRANTS EXPENDITURE	TOTAL AUXILIARY ENTERPRISES EXPENDITURES	TOTAL CURRENT FUNDS EXPENDITURES	ENDING MARKET VALUE OF ENDOWMENT
Cluster 1	20	1.25	1.37	.64	1.01	1.07	1.58
Cluster 2	4	1.51	1.32	1.31	1.27	1.42	27.71
Cluster 3	12	1.08	.12	2.46	1.08	1.18	.30
Cluster 4	1	15.44	11.67	.00	56.60	23.30	.00
Cluster 5	68	.97	1.03	.99	.96	.98	2.35
Cluster 6	19	1.63	1.55	2.20	1.49	1.62	.34
Cluster 7	1	.03	.03	1.60	.92	.02	.63
Cluster 8	34	1.07	1.04	.74	.73	.97	.26
Cluster 9	32	1.04	.94	1.37	.73	1.01	.31
Cluster 10	177	.84	.89	.85	.81	.84	.42
Cluster 11	27	1.12	1.02	.81	.85	1.04	.46
Cluster 12	38	.90	.92	1.43	.62	.89	.78
Cluster 13	66	.94	.92	.75	1.11	.96	.28
Population	499	1.00	1.00	1.00	1.00	1.00	1.00

TABLE VI
CHARACTERISTICS OF THIRTEEN CLUSTERS
AND THE POPULATION

<u>INSTITUTIONAL TYPE</u>	<u>CLUSTER 1</u>		<u>CLUSTER 2</u>		<u>CLUSTER 3</u>		<u>CLUSTER 4</u>		<u>CLUSTER 5</u>	
Other 4 Year	20	1.000	4	1.000	12	1.000	1	1.000	68	1.000
<u>REGION DISTRIBUTION</u>										
New England	0	.000	1	.250	2	.167	0	.000	2	.029
Mid East	7	.350	1	.250	0	.000	0	.000	2	.029
Great Lakes	4	.200	0	.000	2	.167	0	.000	6	.088
Plains	2	.100	1	.250	3	.250	0	.000	15	.221
Southeast	4	.200	0	.000	2	.167	0	.000	37	.544
Southwest	0	.000	1	.250	1	.083	0	.000	6	.088
Rocky Mountains	0	.000	0	.000	0	.000	0	.000	0	.000
Far West	2	.100	0	.000	2	.167	1	1.000	0	.000
Outlying Areas	1	.050	0	.000	0	.000	0	.000	0	.000
<u>RACE OF STUDENTS</u>										
White	20	1.000	4	1.000	11	.917	1	1.000	64	.941
Negro	0	.000	0	.000	1	.083	0	.000	4	.059
<u>SEX OF STUDENTS</u>										
Male	4	.200	1	.250	2	.167	0	.000	2	.029
Female	2	.100	0	.000	0	.000	1	1.000	7	.103
Coed	14	.700	3	.750	10	.833	0	.000	57	.838
Coordinate	0	.000	0	.000	0	.000	0	.000	2	.029
<u>HIGHEST LEVEL OF OFFERING</u>										
2, Less Than 4 Yrs.	0	.000	0	.000	0	.000	0	.000	0	.000
4-5 Yr. Baccalrte.	16	.800	2	.500	10	.833	1	1.000	63	.926
1st Professional	0	.000	1	.250	0	.000	0	.000	0	.000
Masters	1	.050	1	.250	2	.167	0	.000	4	.059
Less Than Ph.D.	1	.050	0	.000	0	.000	0	.000	0	.000
Doctorate	2	.100	0	.000	0	.000	0	.000	1	.015
<u>FTE STUDENTS</u>										
0 - 1000	16	.800	3	.750	11	.917	1	1.000	47	.691
1001 - 2000	4	.200	1	.250	1	.083	0	.000	20	.294
2001 - 3000	0	.000	0	.000	0	.000	0	.000	1	.015
3001 - 4000	0	.000	0	.000	0	.000	0	.000	0	.000
4001 & Over	0	.000	0	.000	0	.000	0	.000	0	.000

TABLE VI (CONTINUED)
 CHARACTERISTICS OF THIRTEEN CLUSTERS
 AND THE POPULATION

<u>INSTITUTIONAL TYPE</u>	<u>CLUSTER 6</u>		<u>CLUSTER 7</u>		<u>CLUSTER 8</u>		<u>CLUSTER 9</u>		<u>CLUSTER 10</u>	
Other 4 Year	19	1.000	1	1.000	34	1.000	32	1.000	177	1.000
<u>REGION DISTRIBUTION</u>										
New England	2	.105	0	.000	4	.118	1	.031	12	.068
Mid East	0	.000	0	.000	9	.265	1	.031	16	.090
Great Lakes	5	.263	0	.000	8	.235	4	.125	38	.215
Plains	3	.158	0	.000	2	.059	2	.063	39	.220
Southeast	1	.053	1	1.000	6	.176	20	.625	45	.254
Southwest	4	.211	0	.000	0	.000	3	.094	9	.051
Rocky Mountains	1	.053	0	.000	0	.000	0	.000	3	.017
Far West	3	.158	0	.000	5	.147	1	.031	14	.079
Outlying Areas	0	.000	0	.000	0	.000	0	.000	1	.006
<u>RACE OF STUDENTS</u>										
White	16	.842	1	1.000	34	1.000	11	.344	175	.989
Negro	3	.158	0	.000	0	.000	21	.656	2	.011
<u>SEX OF STUDENTS</u>										
Male	7	.368	0	.000	1	.029	1	.031	3	.017
Female	0	.000	0	.000	4	.118	1	.031	19	.107
Coed	11	.579	1	1.000	29	.853	30	.938	155	.876
Coordinate	1	.053	0	.000	0	.000	0	.000	0	.000
<u>HIGHEST LEVEL OF OFFERING</u>										
2, Less Than 4 Yrs.	0	.000	0	.000	0	.000	0	.000	1	.006
4-5 Yr. Baccalrte	13	.684	1	1.000	25	.735	28	.875	141	.797
1st Professional	0	.000	0	.000	1	.029	0	.000	2	.011
Masters	4	.211	0	.000	7	.206	4	.125	30	.169
Less Than Ph.D.	0	.000	0	.000	0	.000	0	.000	2	.011
Doctorate	2	.105	0	.000	1	.029	0	.000	1	.006
<u>FTE STUDENTS</u>										
0 - 1000	17	.895	1	1.000	29	.853	24	.750	118	.667
1001 - 2000	2	.105	0	.000	4	.118	7	.219	55	.311
2001 - 3000	0	.000	0	.000	1	.029	0	.000	3	.017
3001 - 4000	0	.000	0	.000	0	.000	1	.031	1	.006
4001 & Over	0	.000	0	.000	0	.000	0	.000	0	.000

TABLE VI (CONTINUED)
 CHARACTERISTICS OF THIRTEEN CLUSTERS
 AND THE POPULATION

<u>INSTITUTIONAL TYPE</u>	<u>CLUSTER 11</u>		<u>CLUSTER 12</u>		<u>CLUSTER 13</u>		<u>POPULATION</u>	
Other 4 Year	27	1.000	38	1.000	66	1.000	499	1.000
<u>REGION DISTRIBUTION</u>								
New England	2	.074	0	.000	11	.167	37	.074
Mid East	1	.037	7	.184	15	.227	59	.118
Great Lakes	7	.259	9	.237	10	.152	93	.186
Plains	5	.185	7	.184	5	.076	84	.168
Southeast	4	.148	7	.184	12	.182	139	.279
Southwest	1	.037	2	.053	4	.061	31	.062
Rocky Mountains	2	.074	1	.026	2	.030	9	.018
Far West	5	.185	5	.132	6	.091	44	.088
Outlying Areas	0	.000	0	.000	1	.015	3	.006
<u>RACE OF STUDENTS</u>								
White	26	.963	37	.974	63	.955	463	.928
Negro	1	.037	1	.026	3	.045	36	.072
<u>SEX OF STUDENTS</u>								
Male	0	.000	2	.053	0	.000	23	.046
Female	8	.296	2	.053	10	.152	54	.108
Coed	19	.704	33	.868	55	.833	417	.836
Coordinate	0	.000	1	.026	1	.015	5	.010
<u>HIGHEST LEVEL OF OFFERING</u>								
2, Less Than 4 Yrs.	0	.000	0	.000	0	.000	1	.002
4-5 Yr. Baccalrte	24	.889	26	.684	58	.879	408	.818
1st Professional	0	.000	0	.000	1	.015	5	.010
Masters	2	.074	10	.263	6	.091	71	.142
Less Than Ph.D.	1	.037	1	.026	1	.015	6	.012
Doctorate	0	.000	1	.026	0	.000	8	.016
<u>FTE STUDENTS</u>								
0 - 1000	26	.963	25	.658	46	.697	364	.729
1001 - 2000	1	.037	12	.316	19	.288	126	.253
2001 - 3000	0	.000	1	.026	0	.000	6	.012
3001 - 4000	0	.000	0	.000	0	.000	2	.004
4001 & Over	0	.000	0	.000	1	.015	1	.002

are presented in Table VIII. A discussion of these ratios is contained in the last section of this cluster.

A REVIEW OF THE THIRTEEN CLUSTERS

CLUSTER 1

Cluster 1 contains a total of 20 colleges (see Appendix A). For the convenience of the reader, the data in Tables IV and V are presented graphically in Figure 1.

Figure 1 is a percentage comparison of the 12 cluster ratios to the population ratios. The cluster ratios are expressed as index numbers with the population ratios as the base (1.00). For example, the horizontal line on Figure 1 is located at the index base of 1.000. The numbers on this horizontal line (1 through 12) identify each of the 12 ratios. These 12 identification numbers and their corresponding titles are presented on the following page for the convenience of the reader (see Table VII). Thus, for Figure 1, number 1 on the horizontal line is the identification code for the educational and general revenue per FTE ratios. As can be seen on Figure 1, Cluster 1 colleges on the average have a higher level of education and general revenue per FTE student than does the population average, (the "average college" in this population of 499 institutions). The reader should remember also that when the terms "average college" or "population average" are used, the author is referring to a ratio mean of the 499 colleges. When the

TABLE VII

FISCAL RATIO CODES AND TITLES FOR
FIGURES ONE THROUGH THIRTEEN

<u>CODE</u>	<u>TITLE</u>
1	Educational and General Revenue
2	Student Tuition and Fees Revenue
3	Private Gifts Revenue
4	Student Aid Revenue
5	Total Auxiliary Enterprises Revenue
6	Total Current Funds Revenue
7	Total Educational and General Expenditures
8	Instruction and Departmental Research Expenditures
9	Student Aid Grants Expenditure
10	Total Auxiliary Enterprises Expenditures
11	Total Current Funds Expenditures
12	Ending Market Value of Endowment

term "mean" is used, the author is referring to a ratio mean of the colleges in a cluster.

An inspection of Figure 1 points out that three ratios are the most important in distinguishing the colleges in Cluster 1 from the population. Ratio 3, private gifts revenue has a value that is 2.73 times the population average, \$2029 compared to \$743. Ratio 9, student aid grants expenditures has a value much less than the population base, \$238 compared to \$377. Ending market value of endowment, ratio 12, is much higher than the population average, \$4181 compared to \$2654. In addition to these three ratios, two other expenditure ratios, total education and general expenditures (ratio 7) and instruction and departmental research expenditures (ratio 8), were at least 25 percent higher than their corresponding population averages.

Inspection of Table VI revealed that all 20 colleges in Cluster 1 enrolled predominantly white students and were located in six of the nine regions. Four colleges offered a degree at the masters level or above and two offered a doctorate. All 20 colleges had an enrollment of less than 2000 FTE students.

In summary, Cluster 1 colleges receive a higher amount of their revenue from private gifts and also are well endowed. These colleges provide fewer dollars for student aid grants than the average college. They also spend more

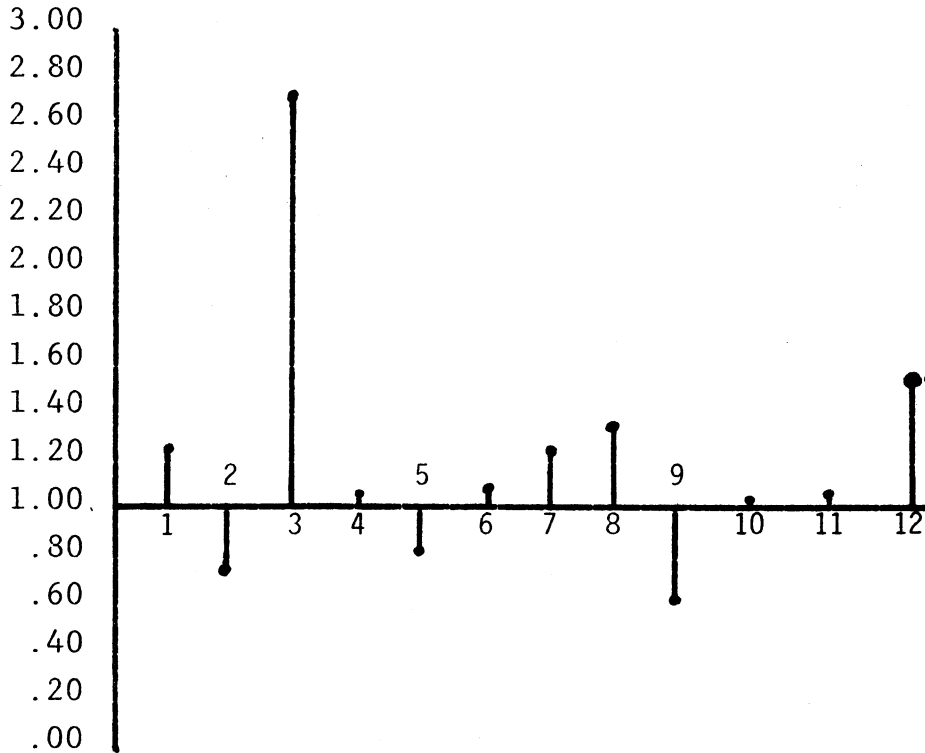


FIGURE 1

PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);
CLUSTER ONE

per FTE student on educational and general, and instruction and departmental research functions than the average college.

CLUSTER 2

Cluster 2 contains a total of four colleges. It is obvious from Figure 2 that ending market value of endowment (ratio 12) is the most important variable for this cluster. The cluster per FTE mean for this ratio is \$73,530, while the population average is only \$2654. The four colleges in this cluster had the following per FTE amounts: Saint Alphonsus College, \$66,000; School of the Ozarks, \$50,207; Academy of the New Church, \$44,584; and University of Plano, \$133,333.

Institutions in Cluster 2 received one and a half times more educational and general revenue (ratio 1) than the average college and also expended one and a half times as much for this same function (ratio 7). It is also interesting to note that Cluster 2 colleges received a lower than average amount of income from student tuition and fees (ratio 2), and at the same time spent more than average on student aid grants.

All but one college in Cluster 2 have an FTE student enrollment of less than 1000 students (Table VI). Two institutions offer degree programs beyond the baccalaureate level. All of these colleges enroll primarily white students.

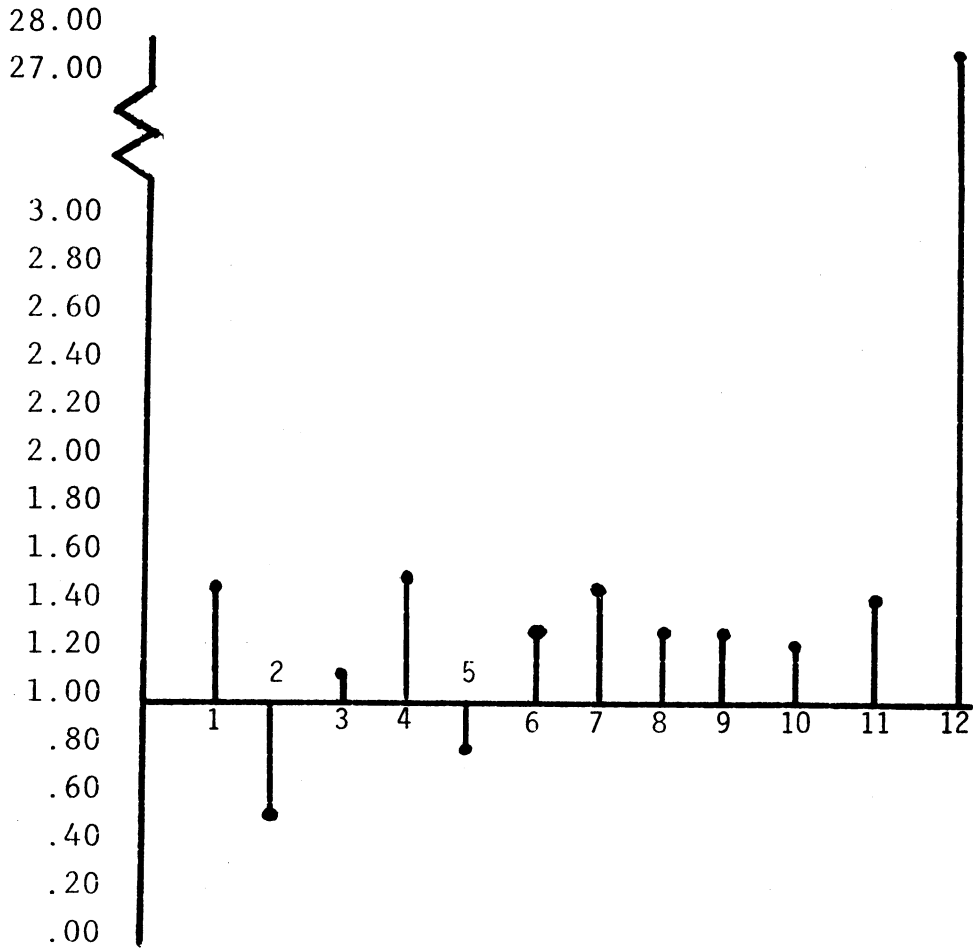


FIGURE 2

PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);

CLUSTER TWO

In summary, Cluster 2 institutions have an exceedingly high level of endowment. They spend one and a half times more on education and general activities and also provide more money than the average college for student aid expenditures. They receive substantially less from student tuition and fees.

CLUSTER 3

Cluster 3 contains 12 colleges. An inspection of Figure 3 reveals that these colleges receive a high level of income from private gifts revenue (ratio 3) and from student aid revenue (ratio 4), while having very low levels of endowment (ratio 13). It is no surprise that these colleges expend a higher amount for student aid grants. Only \$139 per FTE student was spent for instruction and departmental research for Cluster 3 colleges; this compares to \$1151 for the average college in the study.

Two of the colleges offer degrees beyond the baccalaureate level. All but one have an FTE student enrollment of less than 1000 students.

In summary, Cluster 3 institutions receive and spend more money for student aid grants than does the average institution. These institutions also receive a higher than average amount of income from private gifts, but have a very low endowment level. Another important characteristic is the very small amount of money spent for instruction and departmental research.

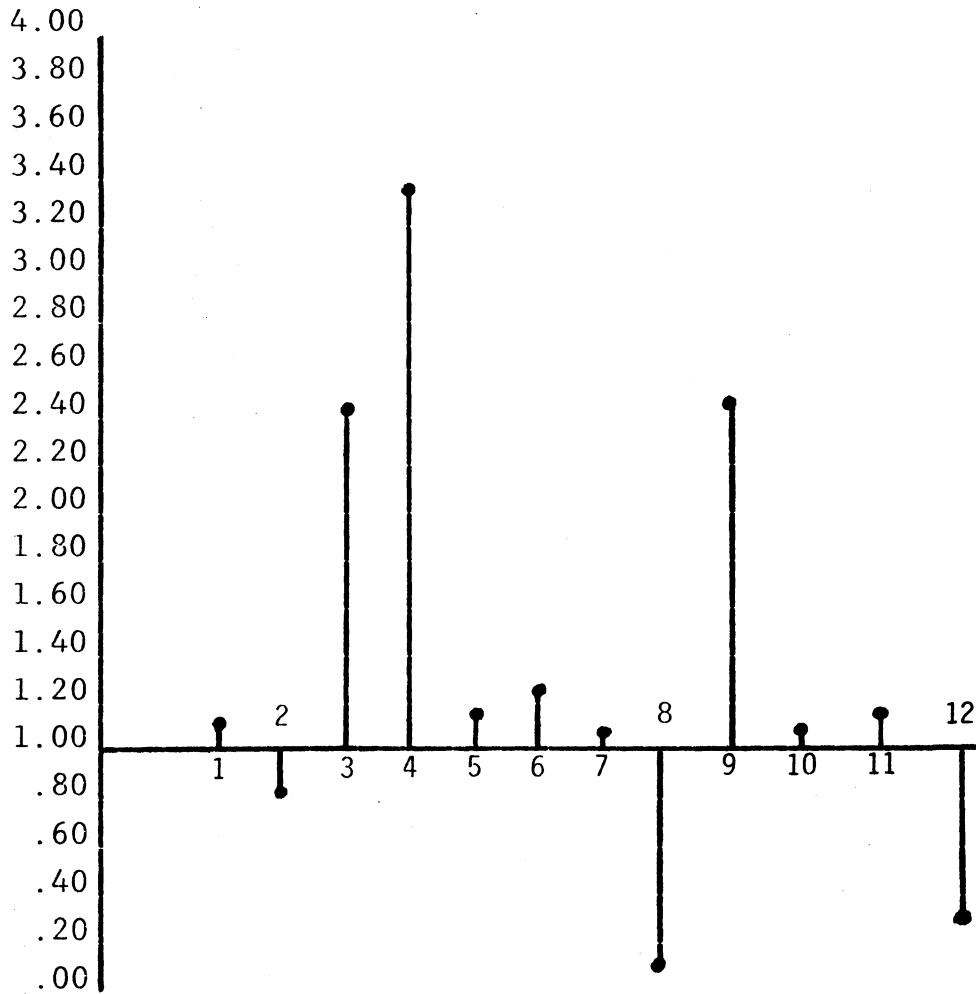


FIGURE 3

PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);

CLUSTER THREE

CLUSTER 4

Cluster 4 contains only one college, Russell College. An inspection of Figure 4 indicates that Russell College has unusually high amounts for most all FTE ratios and no amount reported for student aid revenue (ratio 4), auxiliary enterprise revenue (ratio 5), or student aid grants expenditure (ratio 10).

At first glance it appears that erroneous data were recorded for Russell College. The Roman Catholic women's college is owned by the Sisters of Mercy of California and Arizona. The enrollment of the College is restricted to female members of Catholic congregations. The college educates women devoted to teaching, nursing, and social work (American Council on Education, 1973, p. 228). A review of the fiscal data reported by the American Council on Education for Russell College revealed that the college had total revenue of \$254,871 of which \$202,094 was received from "other" sources, i.e., not student tuition and fees, or gifts. The Higher Education Directory for fall 1973-74 reported that Russell College had a fall 1972-73 head-count enrollment of 33 students (U.S. Office of Education, 1974, p. 41). The data for this study reported a total FTE enrollment for fall 1973-74 of five students.

The high level of educational and general revenue per FTE student (ratio 1) when viewed with the relatively low levels of revenue received from tuition and fees (ratio 2) and private gifts (ratio 3) seems to be consistent with

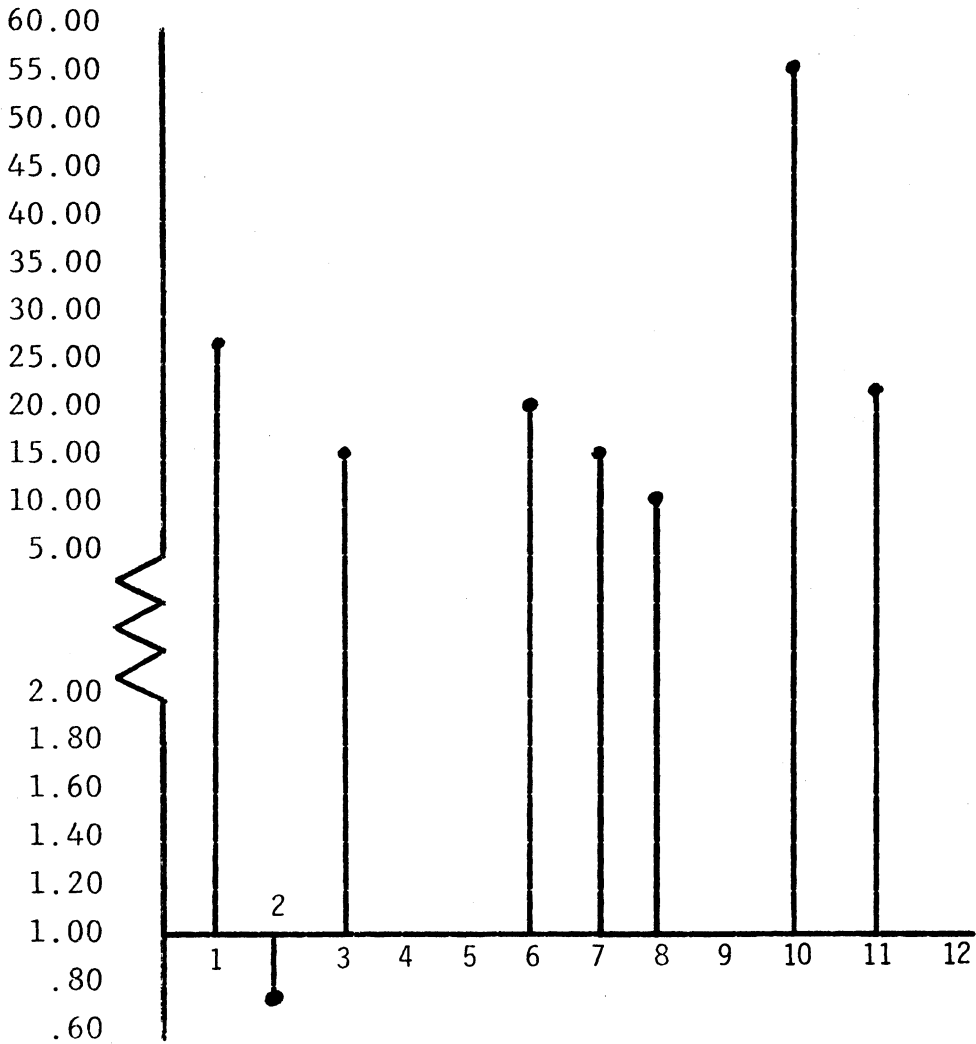


FIGURE 4

PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);

CLUSTER FOUR

the financial pattern reported by the American Council on Education. In any event, the data used for this report do single out Russell College.

CLUSTER 5

Sixty-eight institutions are in Cluster 5. The ratio, ending market value of endowment (ratio 12), accounts for the most difference between Cluster 5 and the population average (see Figure 5). In addition, student aid revenue (ratio 4) is much lower than the average. All of the other variables are very close to the population average.

It is interesting to note that 52, or 67 percent, of the 68 colleges in Cluster 5 are from two of the nine regions, (Plains, 22 percent, and Southeast, 54 percent). All but 11 of the colleges have an FTE student enrollment of less than 1000 students.

In summary, Cluster 5 is dominated by ratio 12, ending market value of endowment, and ratio 4, student aid revenue. These colleges are located primarily in two regions, the Plains and the Southeast.

CLUSTER 6

Cluster 6 contains 19 colleges and all of its ratios deviate from the population average. An inspection of Figure 6 reveals that private gifts revenue, (ratio 3) is the most important ratio, \$3044 per FTE student compared to \$743 for the population average. All of the other revenue

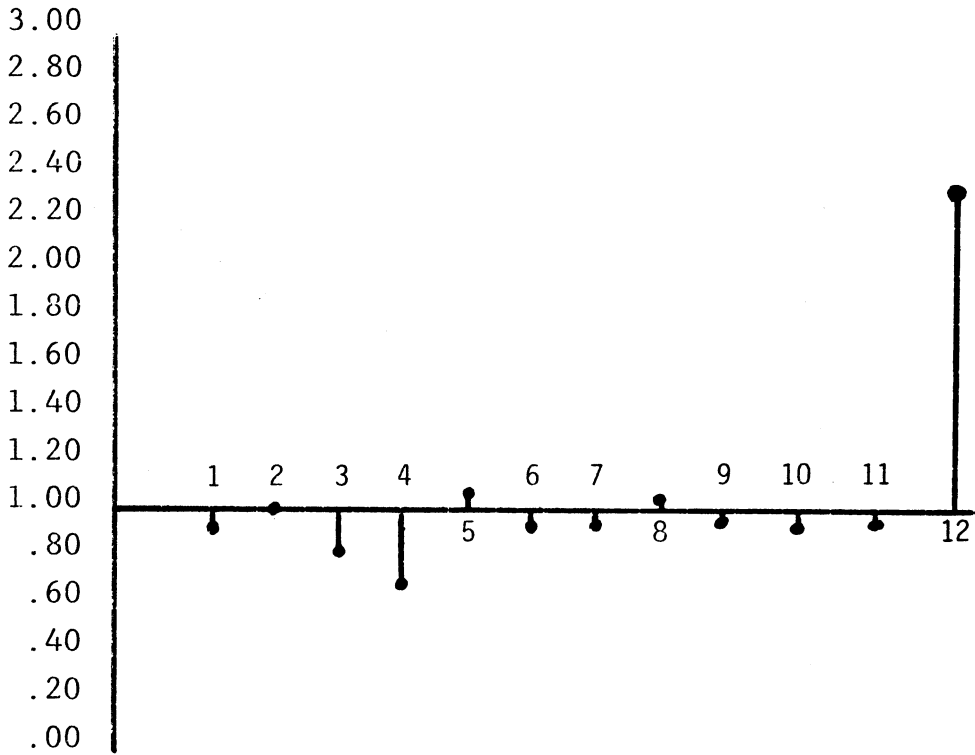


FIGURE 5
PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);
CLUSTER FIVE

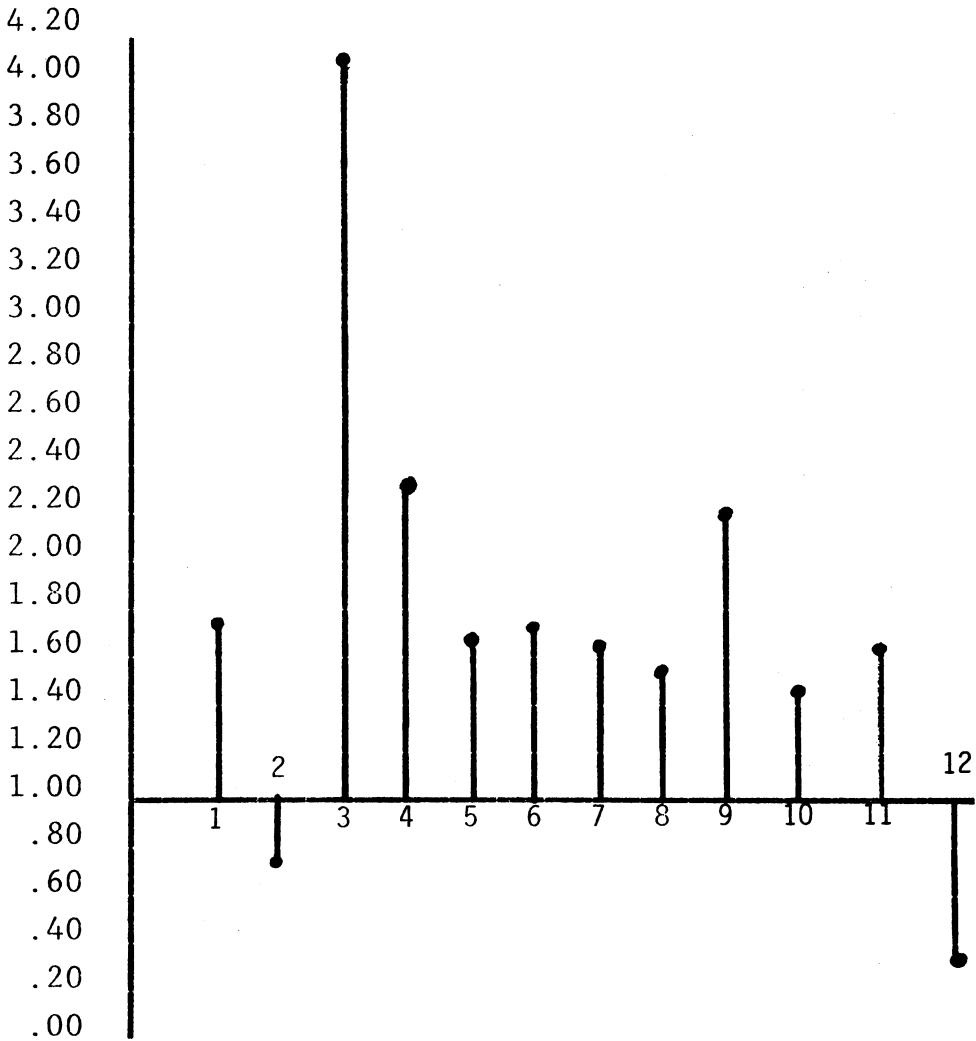


FIGURE 6
PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);
CLUSTER SIX

ratios are much higher than the average college, with the exception of student tuition and fees revenue which is below the average college. The expenditure ratios are all above the population average. Ratio 9, student aid grants expenditure, is the most important ratio of the expenditure ratios. Ending market value of endowment (ratio 12) falls well below the population average.

The 19 colleges are scattered throughout all the nine regions and 89 percent of them have an FTE student enrollment of less than 1000 students. Seven male colleges are included in Cluster 6.

In summary, Cluster 6's ratios deviate from the population average. The college has a small endowment and collects less than average tuition and fees income, but it does have a large private gifts income and it spends \$828 on student aid per FTE student while the average college spends only \$377.

CLUSTER 7

Salem College is the only institution in Cluster 7. An inspection of Figure 7 reveals that most of the ratios are much lower than the average college. Only ratio 9, student aid grants expenditures, was above the average.

The financial data for Salem College were examined in *American Universities and Colleges* (1973) and it was obvious that erroneous data had been recorded for the college. These data were not corrected in this study since

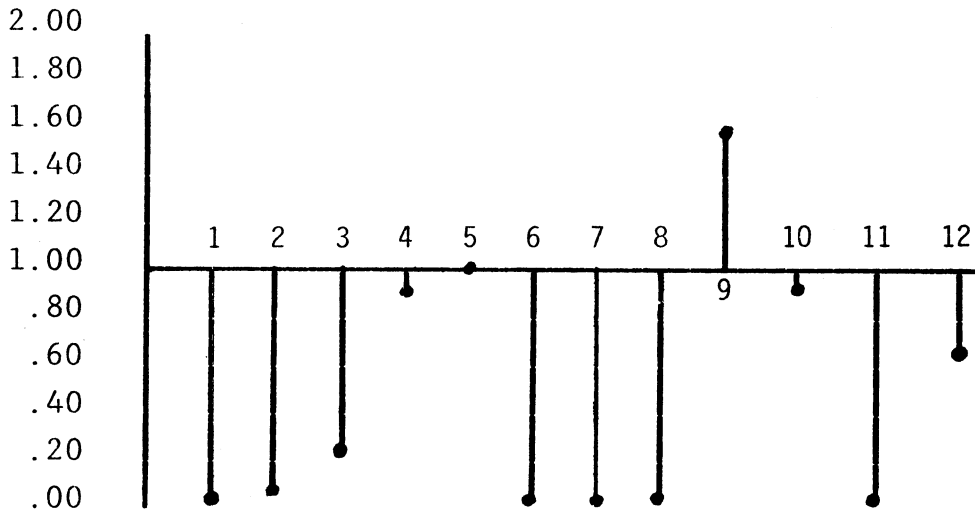


FIGURE 7

PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);

CLUSTER SEVEN

this case provided another important use for this cluster technique. This will be reviewed in Chapter V.

CLUSTER 8

Thirty-four institutions are included in Cluster 8. An inspection of Figure 8 reveals that ratios 12 and 4 are the most important. Ratio 12, ending market value of endowment, is much lower than the population average. In addition, ratio 4, student aid revenue, is lower than the average, \$105 compared to \$241.

Eighty-five percent of these colleges have an FTE student enrollment of less than 1000 students. Eight of them offer degrees beyond the baccalaureate level. The institutions are distributed throughout most of the nine regions.

In summary, the colleges in Cluster 8 operate at a lower level than the average college. Their low level of student aid revenue and small endowment are distinguishing characteristics for these colleges.

CLUSTER 9

Cluster 9 contains a total of 32 colleges. In general, the fiscal operating level of these colleges is below that of the average. These colleges collect less money from student tuition and fees, and have very small endowments (see Figure 9). In contrast to the low operating levels for most of the financial ratios, student aid revenue and student aid grants expenditures are above the average.

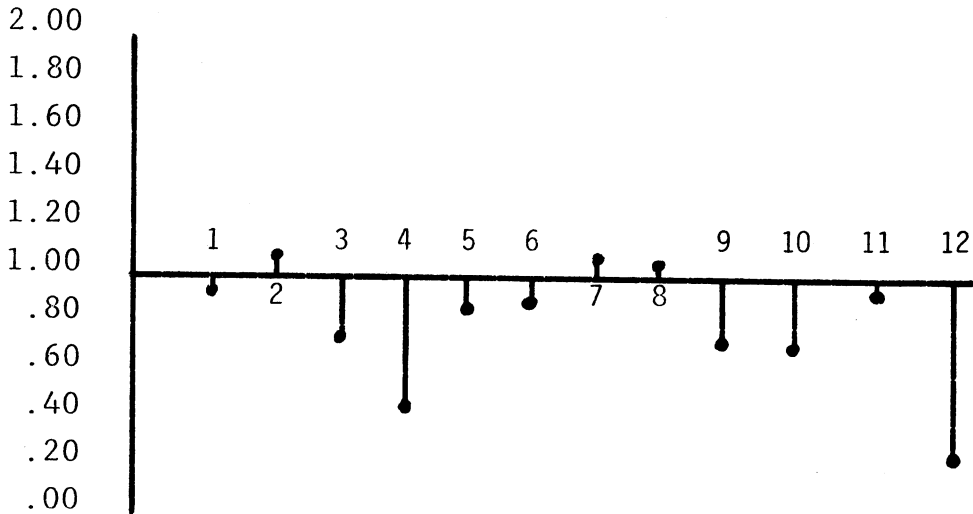


FIGURE 8
PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);
CLUSTER EIGHT

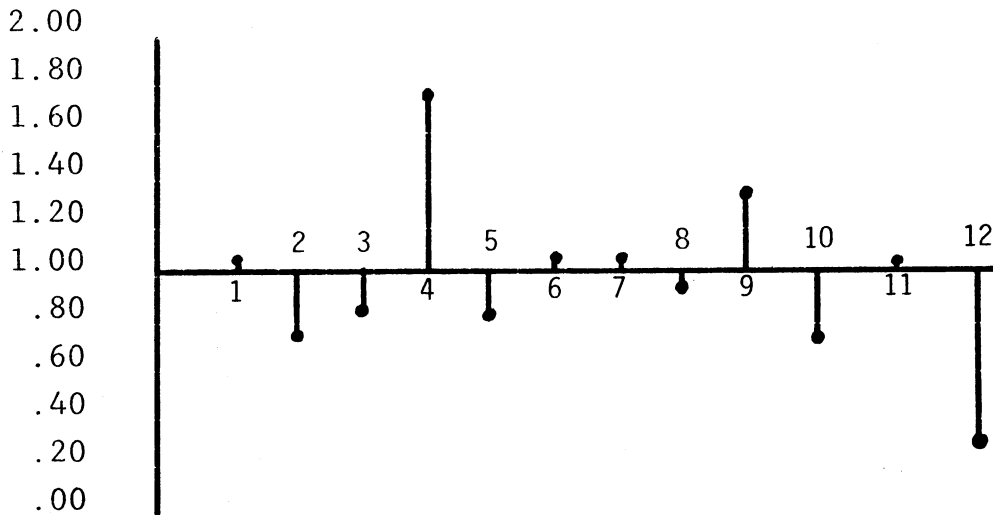


FIGURE 9

PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);

CLUSTER NINE

It is important to note that of the total 36 Black colleges in this study, 21 of them are included in Cluster 9. Studies have documented that Black colleges tend to have a low tuition level and expend large amounts on financial aid (Millett, 1975; and Brubacher and Rudy, 1968). The data presented for Cluster 9 substantiate those conclusions. Most of these colleges are located in the Southeast; this is also true for Black colleges.

In summary, 65 percent of the colleges in Cluster 9 are Black colleges. The financial characteristics for this cluster are consistent with descriptive data from studies of Black colleges.

CLUSTER 10

Cluster 10 contains 177 colleges, or 35 percent of the total population of 499 institutions in this study. Ratio 12, ending market value of endowment, is the most important; however, ratio 3, private gifts revenue, and ratio 4, student aid revenue, are also important discriminators.

It is important to note from Figure 10 that all but one ratio, student tuition and fees revenue, are below the average for all colleges in this study. This point will be further discussed in Chapter V.

The general characteristic data were distributed about the same as the data for all the colleges in the study.

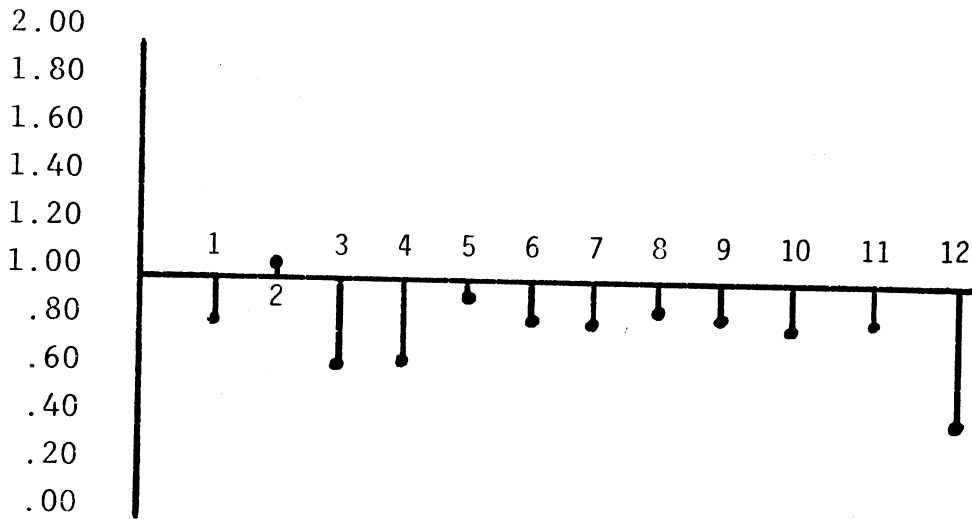


FIGURE 10
PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);
CLUSTER TEN

CLUSTER 11

Cluster 11 contains 27 colleges. An inspection of Figure 11 reveals that ratio 3, private gifts revenue, is the key ratio. Ratio 12, ending market value of endowment, also is an important discriminator. All of the other financial ratios did not deviate much from the average college.

The general characteristic data revealed that 96 percent of the colleges in this cluster have a fall FTE student enrollment of less than 1000 students. Only three institutions offer a degree beyond the baccalaureate level.

CLUSTER 12

Cluster 12 contains a total of 38 colleges. A number of ratios in this cluster are key discriminators. In descending order, they are: student aid revenue, ratio 4; student aid grants expenditures, ratio 9; private gifts revenue, ratio 3; and total auxiliary enterprises expenditures, ratio 10; total auxiliary enterprises revenue, ratio 5; and finally ending market value of endowment, ratio 12.

An inspection of Figure 12 reveals that these colleges receive and spend larger than average amounts for student aid. It is also interesting to note that the colleges generally have a lower level of operation for auxiliary enterprises than the average college. These colleges also have a lower level of private gifts revenue (ratio 3)

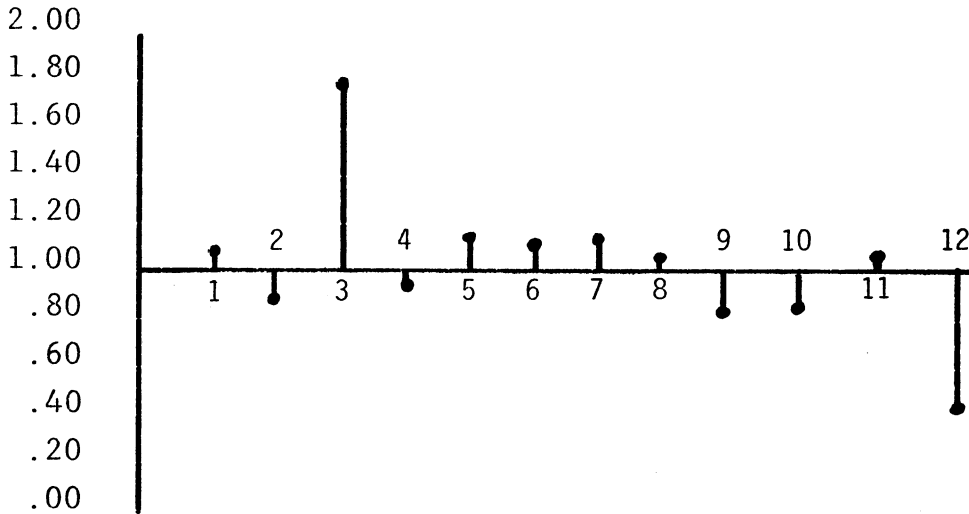


FIGURE 11

PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);

CLUSTER ELEVEN

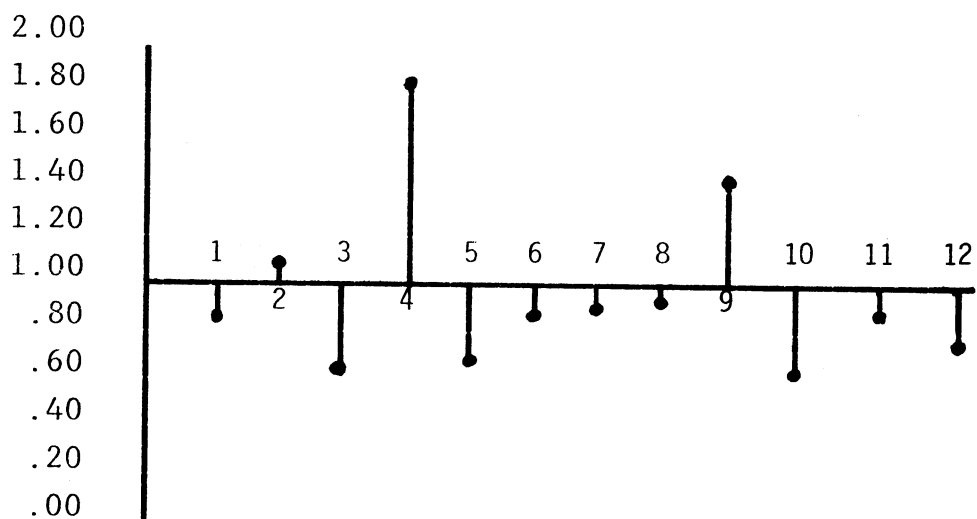


FIGURE 12
PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);
CLUSTER TWELVE

and ending market value of endowment (ratio 12). Thirty-two percent of the colleges in this cluster had a FTE student enrollment between 1000 and 2000 students.

CLUSTER 13

Cluster 13 contains 66 institutions. Three financial variables are key discriminators (see Figure 13). Ending market value of endowment (ratio 12) is the most important, while private gifts revenue and student aid revenue are ranked two and three respectively. It is also interesting to note that these colleges operate their auxiliary enterprises at a level above the average.

DESCRIPTIVE FINANCIAL RATIOS

In the previous section, the operating level of each ratio of the clusters was compared to that of the population average. This comparison provided information about the volume of operation; however, it provided no insight into the question concerning financial soundness of operation. To obtain this type of information, four financial ratios were calculated.

The four ratios are presented in Table VIII. No attempt was made to calculate every ratio used in educational financial analysis; however, these four ratios are frequently used (Andrew and Friedman, 1976; American Council on Education, 1976). The four ratios were calculated by dividing the revenue data into the expenditure data

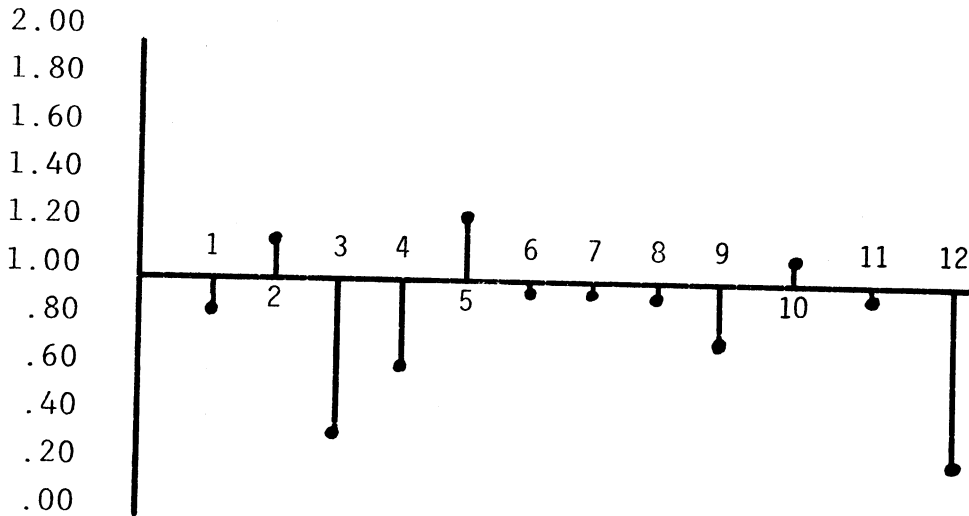


FIGURE 13
PERCENTAGE COMPARISON OF CLUSTER RATIOS
TO POPULATION RATIOS EXPRESSED AS
INDEX NUMBERS WITH POPULATION
AVERAGES AT THE BASE (1.00);
CLUSTER THIRTEEN

TABLE VIII

FOUR DESCRIPTIVE FINANCIAL RATIOS
FOR ELEVEN CLUSTERS AND THE
POPULATION

CLUSTERS	NUMBER OF COLLEGES	EDUCATIONAL & GENERAL EXPENDITURES/ REVENUE	STUDENT AID EXPENDITURES/ REVENUE	AUXILIARY ENTERPRISES EXPENDITURES/ REVENUE	TOTAL CURRENT FUNDS EXPENDITURES/ REVENUE
Cluster 1	20	.93	.97	1.32	1.00
Cluster 2	4	.94	1.32	1.70	1.04
Cluster 3	12	.89	1.15	1.00	.95
Cluster 5	68	.95	2.16	.98	1.02
Cluster 6	19	.89	1.49	.99	.96
Cluster 8	34	1.05	2.63	.90	1.08
Cluster 9	32	.96	1.20	.97	.99
Cluster 10	177	.96	1.93	.94	1.00
Cluster 11	27	.98	1.36	.82	.97
Cluster 12	38	.99	1.22	1.24	1.02
Cluster 13	66	.99	1.88	.97	1.02
Population	499	.94	1.57	1.09	1.01

for the following items: educational and general, student aid, auxiliary enterprises, and total current funds.

Excluded from this review are Clusters 4 and 7.

The unique nature of the financial data for Russell College and the erroneous data for Salem College made any inter-cluster comparisons involving these two clusters meaningless.

Educational and General Ratio

An inspection of Table VIII reveals that only one cluster, Cluster 8, has a deficit in the educational and general functional area. Clusters 3 and 6 spent only 89 percent of the revenue they collected for this function, while the average college expended 94 percent.

Student Aid

Previous studies have documented the fact that many private liberal arts colleges experience a deficit in the student aid functional area (Jellema, 1973; Lanier and Anderson, 1975; Shulman, 1974). The ratios of Table VIII substantiate this finding. Only Cluster 1 avoided a deficit situation, while all of the other clusters spent more than they received for this functional area.

Auxiliary Enterprises

Auxiliary enterprises operations were profitable for all clusters except 1, 2, 3, and 12. Cluster 11 reported an 18 percent profit in the operation of its

auxiliary enterprises, but most profitable clusters experienced a more modest profit situation.

Total Current Funds

Five clusters had an operating deficit for FY 1974. Clusters 1, 3, 6, 9, 10 and 11 reported a favorable financial position for that year. The average college had a deficit for the period.

SUMMARY

The results of the NORMIX analysis revealed that there are 13 fiscal sub-classifications of institutions in the Liberal Arts Colleges II category. Cluster 1 contains 20 colleges and is distinguished by a high level of endowment and private gifts revenue.

Cluster 2 contains 4 colleges which have the highest level of endowment per FTE student. Student tuition and fees revenue is extremely low for the colleges; however, the colleges collect more and spend more funds for the educational and general function than the average college for this population of institutions. These colleges also receive and spend more funds on student aid than the average college.

Cluster 3 contains 12 colleges. These colleges are heavily engaged in student aid efforts. They also receive more revenue per FTE student from private gifts (\$1784) than from student tuition and fees (\$1325).

Only one institution is included in Cluster 4. The fiscal amounts for this institution seem excessive; however, its unique role probably accounts for its isolation in this study.

Sixty-eight colleges are in Cluster 5. These colleges have a high level of endowment. All of the other financial ratios are very similar to those of the average college.

Nineteen colleges are in Cluster 6. These colleges receive a high level of income from private gifts. They also receive and spend more money than average for student aid; this seems to take on additional significance in light of the low tuition and fee revenue received by them. In general, most of the other financial ratios are higher than average which is indicative of a higher overall operating level for these colleges.

Cluster 7 contains only one college. A review of the financial data for this college indicates that erroneous data were recorded on the HEGIS tape for the institution.

Thirty-four colleges are in Cluster 8. These colleges receive most of their income from student tuition and fees. They also have an extremely low level of endowment.

Cluster 9 contains 32 colleges. These colleges are heavily engaged in student aid activities and have a

lower than average level of student tuition and fee revenue. These colleges also have a low level of endowment.

Cluster 10 contains 177 colleges. In general, the operating level for these institutions is below that of the average college. Private gifts revenue and endowment funds are the most discriminating ratios for this group.

Twenty-seven colleges are included in Cluster 11. These colleges receive a significantly higher level of revenue from private gifts, but have a low level of endowment. The other financial ratios are very similar to those of the average college.

Thirty-eight colleges are included in Cluster 12. These colleges have a high level of student aid income and expenditures. The level of operation for auxiliary enterprises is below that of the average college.

The final cluster, Cluster 13, contains 66 colleges. These colleges generally have financial levels below the average college. Endowment and private gifts are the most discriminating ratios. These colleges also have a higher level of operation for auxiliary enterprises than does the average college.

The four descriptive financial ratios were calculated for all clusters except 4 and 7. The data presented in Table VIII show that only four clusters reported a profitable year for FY 1974. Most of the institutions

spend more on student aid than they collect for that function. This deficit is very common for private liberal arts colleges. Seven of the clusters reported a profitable situation from the operation of auxiliary enterprises. Only one cluster experienced a deficit for the functional area of educational and general.

Chapter V

CONCLUSIONS

SUMMARY

This study focused on the need for a more useful taxonomy for private colleges classified as Liberal Arts Colleges II. In Chapter II, a review of the literature emphasizing two major areas was presented. These major areas of literature review were: (1) financial studies in higher education, and (2) taxonomy construction.

The literature by Jenny (1970), Jellema (1971), Cheit (1971), Rivlin (1971), Columbia Research Associates (1971), Lanier and Anderson (1975), and Andrew and Friedman (1976) indicated that financial research on private colleges and especially on those classified as Liberal Arts Colleges II had often produced conflicting conclusions. The National Commission on Financing Postsecondary Education noted the conflict between the conclusions of earlier studies.

Recent research identified some of the possible causes for this confusion. It was recommended that the Carnegie classification category of Liberal Arts Colleges II be revised to produce more homogeneous groupings for these colleges.

As a result of the need for refinement of this classification category, the following research question was formulated and investigated:

Are there fiscal sub-classifications of private institutions within the Liberal Arts Colleges II category?

The institutional population for this study consisted of 499 private colleges classified as Liberal Arts Colleges II that were in operation during fiscal year 1973-74. A computer tape of HEGIS IX data provided by the National Center for Educational Statistics, "Financial Statistics of Institutions of Higher Education 1974," was utilized for the collection of data and computation of specific measures.

Twelve financial variables were selected based on the results of the Lanier-Anderson (1975), Bowen-Minter (1975), and Andrew-Friedman (1967) studies. These variables were developed independently by several different researchers; therefore, there has been a minimum bias in the selection of ratios, a matter of critical concern in developing a taxonomy. The major bias is a limitation of the study; i.e., it was limited to classifying by financial variables.

The NORMIX cluster analysis was used to analyze these per FTE ratios to determine if sub-classifications of colleges existed within the total population of 499 institutions. A review of the literature indicated that the NORMIX technique was well suited for this investigation.

Each financial variable was divided by the college's fall 1973-74 FTE student enrollment and the quotient was used as the ratio for this study. This procedure was used to express the financial data in terms of the enrollment of each institution. The literature review indicated that per FTE financial ratios were common for fiscal analysis of institutions of higher education (The National Commission on the Financing of Postsecondary Education, 1973; Lanier and Anderson, 1975; and Andrew and Friedman, 1976).

The NORMIX analysis of these ratios produced 13 clusters of colleges. Each of the 13 clusters was reviewed to determine its financial characteristic and to assess the discriminating importance of the ratios. To facilitate this inspection of the ratios, the mean of each ratio was plotted graphically to explain important deviations from the corresponding ratio for the population of 499 colleges. In addition, characteristic data for each cluster was reviewed.

SUMMARY OF RESULTS

For the convenience of the reader, the 13 clusters reviewed in Chapter IV have been consolidated into five groups. The overview provided by the discussion in this chapter should emphasize the heterogeneous nature of these colleges based on their financial characteristics. In addition, the usefulness of this taxonomy and of this technique of taxonomy development should be apparent.

GROUP 1

Group 1 includes Clusters 1, 2 and 5, a total of 92 colleges, and is characterized by a very high level of endowment. The 20 institutions in Cluster 1 have a per FTE endowment of \$4181, the four in Cluster 2 have \$73,530, and the 68 in Cluster 5 have \$6,230; while the average college in the population only has \$2654.

Cluster 1 colleges operated at the break-even point for FY 1974; however, Cluster 2 had a four percent deficit and Cluster 5 had a two percent deficit. The colleges in Cluster 1 were unique in that all of the other clusters had a deficit in student aid; however, Cluster 1 had a three percent reserve. Cluster 2 had a 32 percent deficit and Cluster 5 had a 116 percent deficit in the student aid area. Clusters 1 and 2 had operating deficits in the auxiliary enterprises area, but Cluster 5 had a two percent reserve. Cluster 1 colleges, in addition to having a high level of endowment, also had a very high level of private gifts revenue, collecting \$2029 per FTE student, while Cluster 2 colleges collected \$833 and Cluster 5 collected \$610 per FTE student. Cluster 5 colleges charge about what the average college does for student tuition and fees, \$1636, however, Cluster 1 and 3 colleges charge lower sums, \$1296 and \$1325 respectively.

GROUP 2

In contrast to the colleges in Group 1, the 31 institutions in Group 2 have a very small endowment. Cluster 3 colleges have \$779 and Cluster 6 colleges have \$897 per FTE student in endowment, while the average college has \$2654 per FTE student. In addition, Cluster 3 and Cluster 6 colleges have very high levels of private gift revenue and are committed heavily in the student financial aid area. These colleges also charge lower than average tuition and fees.

Colleges in both clusters experienced a favorable operating position for FY 1974; Cluster 3 colleges had a five percent reserve and Cluster 6 colleges had a four percent reserve. Both colleges had a deficit in financial aid revenue; however, the 31 colleges reported an 11 percent reserve in the educational and general area.

GROUP 3

Group 3 contains Clusters 4 and 7, or two colleges, Russell College and Salem College. These two colleges were singled out from the other colleges because they both had unique financial ratios. Russell College had extremely high ratios, while Salem College had extremely low ratios.

Russell College is operated by the Sisters of Mercy of the California and Arizona Catholic Churches. Apparently the revenue and expenditure levels do not vary with changes

in enrollment because the college is operated as a special purpose agency of the Catholic Church.

Salem College's fiscal data were erroneous and therefore the institution had extremely low amounts reported for each financial variable. It is important to note that the NORMIX cluster analysis singled each college out as being unique, but also that the two colleges were placed in individual clusters.

GROUP 4

Group 4 contains three clusters, 3, 10, and 13, or a total of 277 colleges. These colleges are distinguished by their very low level of endowment, their low level of private gifts revenue and their low student aid revenue.

Cluster 8 colleges had only \$686 per FTE student in endowment funds, while Cluster 10 and 13 colleges only had \$1115 and \$737 respectively. This compares to a population average of \$2654 per FTE student.

Cluster 8 colleges collected \$561 per FTE student from private gift sources, while Cluster 10 colleges received \$482 and Cluster 13 only \$285 per FTE student. The average college collected \$743 per FTE student from private gifts.

In addition, all three clusters had lower than average student aid revenue. The average college collected \$241, but the institutions in Clusters 8, 10, and 13 only

received \$105, \$165, and \$150 respectively. At the same time, the 277 colleges in these three clusters experienced extremely high deficits in the student aid area. Cluster 8 reported a deficit of 163 percent, while Cluster 10 colleges had a 93 percent deficit and Cluster 13 colleges had a 88 percent deficit. All of the 277 colleges in this group charged higher than average for tuition and fees.

GROUP 5

The 97 colleges in Clusters 9, 11, and 12 form Group 5. These colleges are distinguished from the other colleges by their low level of endowment. All of these colleges had a lower than average level of endowment funds per FTE student. Cluster 11 colleges received a high level of funding per FTE student from private gift sources; however, Clusters 9 and 12 were below average.

Clusters 9 and 12 colleges also received a high level of revenue for student aid, but Cluster 11 colleges were just below the average. All three clusters reported operating deficits for the student aid area. The colleges in Clusters 9 and 11 reported favorable overall operating positions for FY 1974; however, Cluster 12 colleges experienced a two percent deficit.

IMPLICATIONS OF STUDY

It appears that this financial taxonomy is useful for helping colleges to: (1) locate their financial peers;

(2) examine their financial positions; (3) determine strategies for improving their financial status; and, (4) estimate the financial impact of future mission or curriculum changes based on the experiences of other institutions in the taxonomy. Some examples are presented in the following paragraphs.

In 1973 the National Commission on Financing Post-secondary Education noted the absence of a common definition of "financial distress." The issue still has not been resolved and therefore, the findings of this study do not agree with the conclusions of Lanier and Anderson (1975), Bowen and Minter (1975), or Andrew and Friedman (1976). For this study, a condition of "financial distress" exists when an institution has the following five financial characteristics: (1) no reserve or a deficit in current funds; (2) higher than average tuition and fee income; (3) low private gifts income; (4) a small endowment; and, (5) a deficit in student aid.

Previous studies concluded that approximately 25 percent of the private colleges classified as Liberal Arts Colleges II were in financial distress (Bowen and Minter 1975, and Andrew and Friedman 1976). This study suggests that 315 of the 499 colleges or 64 percent of these colleges are in serious financial trouble. These colleges are in Clusters 8, 10, 12, and 13. The reader should note that these conclusions have been derived from data for only one fiscal year, FY 1974. Therefore, some colleges may have

already improved their fiscal position, or FY 1974 could have been an atypical year for some of the colleges. It would be useful to review trend data for the colleges to obtain a more complete picture.

One of the advantageous features of this study is that its results may be very beneficial to colleges in financial trouble by suggesting corrective actions. For example, the 277 colleges in Clusters 8, 10, and 13 have low levels of endowment and private gifts revenue. They also charge high levels of tuition and fees and experience a large deficit in the student aid area.

These colleges should review their fiscal position and consider corrective strategies. For example, the following questions may surface during such a review:

(1) Should the college seek to increase private gifts income?

(2) Should the college seek to increase endowment funds?

(3) Should the college reduce enrollment to control the student aid deficit?

(4) Should the college maintain its present enrollment level and continue to subsidize students and incur a deficit in the student aid area, but reduce operating scope of other areas to balance the budget?

The 92 colleges in Clusters 1, 2, and 5 also should review their enrollment levels. Even though these colleges

have extremely high endowments, they must continue to review their fiscal operating positions and if necessary abandon their low levels of tuition and fees, or consider changing their mission.

In addition, the 27 colleges in Cluster 11 should review their financial revenue patterns. Their dependence on a high level of private gifts revenue makes them especially vulnerable to any sudden decrease in this source of funding. These colleges should seek to diversify their revenue sources.

The financial data of this study may also help colleges in their review of the quality of their academic program. For example, the 31 colleges in Clusters 3 and 6 recorded an 11 percent reserve in the educational and general area. This reserve may provide an additional opportunity for these colleges to strengthen their academic programs.

This taxonomy may be helpful in distinguishing institutions that are operated for a special group of students. For example, Cluster 9 contains 21 Black colleges or 59 percent of the Black colleges in this study. Additional characteristic data should be added to the clustering process if it is to be used for this purpose.

The clustering technique used in this study may be useful in locating colleges with a single or unique mission. For example, Russell College was isolated in this report

because of its unique fiscal characteristics. However, the uniqueness of its operating budget was related to the unique mission of the college. If additional variables were added during the clustering process, it may be possible to identify other institutions with special missions.

This taxonomy and the clustering procedure used in this study may be helpful in editing financial data. For example, Salem College was isolated in this study because of its extremely low financial ratios. This procedure could be used to test fiscal data for reasonableness.

RECOMMENDATIONS FOR FURTHER RESEARCH

The data of this report raised many questions and established the need for additional study in several areas. It is recommended that:

1. data concerning students, faculty, and curriculum be added to the clustering process.
2. the enrollment be reported in intervals of 200 FTE students.
3. trend data should be included in the taxonomy development process.
4. additional research should use this system for policy analysis.

APPENDIX A

INSTITUTIONAL MEMBERSHIP OF EACH OF
THIRTEEN CLUSTERS BY FEDERAL INTER-
AGENCY COMMITTEE ON EDUCATION
(FICE) IDENTIFICATION CODE,
NAME OF COLLEGE, LOCATION,
AND FALL 1973-74 FULL-
TIME-EQUIVALENT STUDENT
ENROLLMENT (FTE)

CLUSTER NUMBER ONE

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1023	Judson College	ALA	325
1478	Edward Waters College	FLA	516
1663	Spertus Clg., Judaica	ILL	393
1670	Delourdes College	ILL	80
2110	Woodstock College	NY	38
2289	Shaw Clg., Detroit	MICH	1148
2497	Notre Dame College	MO	239
2592	Alma White College	NJ	18
2602	Don Bosco College	NJ	92
2713	Dominican Clg., Blauvelt	NY	684
2772	Mercy College	NY	1150
3013	Athenaeum of Ohio	OHIO	211
3203	Mount Angel Seminary	OREG	119
3257	The Dropsie University	PA	81
3365	Saint Fidelis College	PA	61
3427	Coker College	SC	565
3518	Southern Missionary Clg.	TENN	1424
9192	Sierra Nevada College	NEV	123
9743	Bellevue College	NEBR	599
10015	Bayamon Central Univ.	PR	1085

APPENDIX A (CONTINUED)

CLUSTER NUMBER TWO

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1407	Saint Alphonsus College	CONN	76
2500	School of the Ozarks	MO	1030
3228	Academy of the New Church	PA	142
3653	University of Plano	TEX	90

APPENDIX A (CONTINUED)

CLUSTER NUMBER THREE

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1014	Daniel Payne College	ALA	354
1220	Los Angeles Baptist Clg.	CAL	284
1833	St. Jos' Clg., Main Campus	IND	1047
2213	St. Hyacinth College	MASS	49
2550	John F. Kennedy College	NEBR	235
2998	Northwest Bible College	ND	116
3411	Salve Regina College	RI	781
3465	Mount Marty College	SD	545
7890	Prescott College	ARIZ	457
9640	St. Francis De Sales Clg.	WIS	85
9982	Mid-South Bible College	TENN	79
10831	New College of California	CAL	172

APPENDIX A (CONTINUED)

CLUSTER NUMBER FOUR

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1180	Russell College	CAL	5

APPENDIX A (CONTINUED)

CLUSTER NUMBER FIVE

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1012	Birmingham Southern College	ALA	765
1019	Huntingdon College	ALA	422
1041	Spring Hill College	ALA	838
1094	College of the Ozarks	ARK	421
1099	Hendrix College	ARK	1055
1488	Florida Southern College	FLA	1402
1554	Berry College	GA	1401
1582	Morehouse College	GA	1268
1588	Piedmont College	GA	270
1591	Shorter College	GA	642
1594	Spelman College	GA	1146
1595	Tift College	GA	617
1600	Wesleyan College	GA	522
1688	Illinois College	ILL	720
1798	Franklin College	IND	672
1854	Coe College	IOWA	1095
1887	Simpson College	IOWA	782
1903	Baker University	KANS	735
1905	Bethel College	KANS	587
1929	Kansas Wesleyan	KANS	472
1933	McPherson College	KANS	440
1940	Southwestern College	KANS	610
1952	Asbury College	KY	1166
1988	Union College	KY	670
2003	Centenary College	LA	689
2004	Dillard University	LA	1109
2007	Louisiana College	LA	763
2132	Bradford College	MASS	301
2236	Alma College	MICH	1144
2272	Hillsdale College	MICH	942

APPENDIX A (CONTINUED)

CLUSTER NUMBER FIVE (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
2354	Hamline University	MINN	1210
2398	Blue Mountain College	MISS	239
2414	Millsaps College	MISS	909
2453	Central Methodist College	MO	711
2480	The Lindenwood Colleges	MO	764
2524	William Jewell College	MO	1313
2544	Doane College	NEBR	593
2548	Hastings College	NEBR	667
2555	Nebraska Wesleyan Univ.	NEBR	1052
2898	Wadhams Hall College	NY	104
2911	Bennett College	NC	570
2930	Greensboro College	NC	500
2931	Guilford College	NC	1319
2933	Highpoint College	NC	1022
2957	Queens College	NC	537
2990	Jamestown College	ND	476
3083	Mount Union College	OHIO	1195
3084	Muskingum College	OHIO	1073
3432	Erskine College	SC	758
3445	Presbyterian College	SC	782
3480	Bethel College	TENN	358
3496	King College	TENN	336
3498	Lambuth College	TENN	770
3502	Lincoln Memth. University	TENN	623
3505	Maryville College	TENN	677
3527	Tusculum College	TENN	421
3584	Letourneau College	TEX	684
3588	Mary Hardin-Baylor College	TEX	748
3620	Southwestern University	TEX	872
3651	University of Dallas	TEX	1258

APPENDIX A (CONTINUED)
CLUSTER NUMBER FIVE (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
3663	Wayland Baptist College	TEX	737
3692	Norwich University	VT	1075
3709	Emory and Henry College	VA	867
3720	Lynchburg College	VA	1750
3733	Randolph-Macon Clg., Ashland	VA	826
3808	Bethany College	W VA	1139
3985	Oral Roberts University	OKLA	2463
3988	Our Lady Angels College	PA	309

APPENDIX A (CONTINUED)

CLUSTER NUMBER SIX

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1258	Pacific Union College	CAL	1889
1303	Saint Patrick's College	CAL	57
1367	Saint Thomas Seminary	COLO	178
1587	Paine College	GA	649
1632	Aquinas Inst. of Theology	IOWA	106
1685	Hebrew Theol College	ILL	142
1858	Divine Word College	IOWA	88
2154	Hellenic College	MASS	155
2258	Duns Scotus College	MICH	56
2298	Nazareth College	MICH	405
2321	Saint Mary's College	MICH	86
2508	Saint Mary's College	MO	75
3548	Bishop College	TEX	1034
3637	Jarvis Christian College	TEX	506
3795	Sulpician Sem. of Northwest	WASH	95
7732	Holy Redeemer College	WIS	63
10266	Hillsdale Free Will Baptist College	OKLA	136
10310	American Christian College	OKLA	206
11385	College of the Atlantic	ME	70

APPENDIX A (CONTINUED)

CLUSTER NUMBER SEVEN

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
3820	Salem College	W VA	999

APPENDIX A (CONTINUED)

CLUSTER NUMBER EIGHT

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1008	Athens College	ALA	558
1213	Immaculate Heart College	CAL	501
1216	La Verne College	CAL	1727
1255	Pacific Oaks College	CAL	171
1452	Mount Vernon College	DC	238
1665	Columbia College	ILL	1106
1768	Saint Xavier College	ILL	1097
1787	Bethel College	IND	394
1880	Mount Mercy College	IOWA	726
2023	Our Lady of Holy Cross Clg.	LA	346
2048	Ricker College	ME	236
2119	Atlantic Union College	MASS	641
2574	Franconia College	NH	434
2575	Franklin Pierce College	NH	1026
2597	Bloomfield College	NJ	730
2682	Catholic Immac. Conception	NY	243
2790	Nyack College	NY	636
2825	Saint Joseph's College	NY	591
2832	Saint Thomas Aquinas Clg.	NY	609
2959	Sacred Heart College	NC	156
3116	Rio Grande College	OHIO	661
3225	Warner Pacific College	OREG	376
3247	College of Misericordia	PA	913
3275	Holy Family College	PA	611
3394	Wilkes College	PA	2433
3431	Converse College	SC	819
3526	Trevecca Nazarene Clg.	TENN	752
3708	Eastern Mennonite Clg.	VA	907
3832	Alverno College	WIS	673
3837	Cardinal Stritch Clg.	WIS	723

APPENDIX A (CONTINUED)
CLUSTER NUMBER EIGHT (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
3854	Lakeland College	WIS	427
3873	Mount Senario College	WIS	217
4601	Open Bible College	IOWA	91
6975	Lincoln University	CAL	830

APPENDIX A (CONTINUED)

CLUSTER NUMBER NINE

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1028	Miles College	ALA	985
1037	Selma University	ALA	334
1044	Stillman College	ALA	678
1100	John Brown University	ARIZ	533
1103	Philander Smith College	ARIZ	528
1164	Chapman College	CAL	3188
1559	Clark College	GA	1440
1932	Marymount College	KANS	504
1980	Pikeville College	KY	616
2027	Saint Joseph College	LA	94
2032	Xavier University of LA	LA	1737
2140	College of our Lady of Elms	MASS	421
2433	Rust College	MISS	671
2705	College of Saint Rose	NY	1201
2909	Barber-Scotia College	NC	460
2936	Johnson C. Smith Univ.	NC	1192
2942	Livingstone College	NC	814
2962	Shaw University	NC	1606
2992	Mary College	ND	610
3017	Borromeo College of Ohio	OHIO	95
3141	Wilberforce University	OHIO	1052
3424	Claflin College	SC	845
3439	Morris College	SC	441
3455	Voorhees College	SC	854
3490	Fisk University	TENN	1494
3501	Le Moyne-Owen College	TENN	874
3577	Huston-Tillotson College	TEX	664
3602	Paul Quinn College	TEX	487
3638	Texas College	TEX	532
3739	Saint Paul's College	VA	509

APPENDIX A (CONTINUED)

CLUSTER NUMBER NINE (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
3850	Silver Lake Col.-Holy Family	WIS	279
3911	Viterbo College	WIS	776

APPENDIX A (CONTINUED)

CLUSTER NUMBER TEN

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1029	Mobile College	ALA	714
1043	Saint Bernard College	ALA	360
1074	Grand Canyon College	ARIZ	817
1117	Azusa Pacific College	CAL	1108
1122	Biola College	CAL	2134
1125	Calf. Baptist College	CAL	661
1133	Calf. Lutheran College	CAL	1277
1179	College of Notre Dame	CAL	666
1196	Dominican Col. of San Rafael	CAL	486
1243	Mount Saint Mary's College	CAL	900
1262	Point Coma College	CAL	1385
1291	Simpson College	CAL	326
1302	Saint Mary's Clg. of Calf.	CAL	971
1341	Westmont College	CAL	871
1466	Barry College	FLA	1097
1467	Bethune Cookman College	FLA	1293
1526	Saint Leo College	FLA	972
1583	Morris Brown College	GA	1464
1617	College of Idaho	IDA	739
1624	Northwest Nazarene College	IDA	955
1634	Aurora College	ILL	773
1635	Barat College	ILL	571
1664	Clg. of Saint Francis	ILL	736
1676	Elmhurst College	ILL	1837
1684	Greenville College	ILL	781
1735	North Park College	ILL	1317
1745	Quincy College	ILL	1347
1771	Trinity Christian College	ILL	412
1772	Trinity College	ILL	759
1785	Anderson College	IND	1648

APPENDIX A (CONTINUED)

CLUSTER NUMBER TEN (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1799	Goshen College	IND	1143
1800	Grace Theological Sem. and College	IND	892
1803	Huntington College	IND	520
1821	Marian College	IND	694
1822	Marion College	IND	721
1824	Oakland City College	IND	432
1837	Saint Meinrad College	IND	225
1846	Briar Cliff College	IOWA	676
1847	Buena Vista College	IOWA	739
1852	Clarke College	IOWA	499
1859	Dordt College	IOWA	979
1866	Graceland College	IOWA	1416
1871	Iowa Wesleyan College	IOWA	637
1873	Loras College	IOWA	1312
1874	Luther College	IOWA	1874
1876	Marycrest College	IOWA	721
1883	Northwestern College	IOWA	694
1889	Saint Ambrose College	IOWA	1130
1891	University of Dubuque	IOWA	743
1896	Wartburg College	IOWA	1172
1899	Westmar College	IOWA	656
1900	William Penn College	IOWA	628
1904	Bethany College	KANS	724
1939	Kansas Newman College	KANS	526
1944	Saint Mary Plains College	KANS	395
1954	Bellarmino College	KY	942
1959	Campbellsville College	KY	629
1960	Spalding College	KY	710
1962	Cumberland College	KY	1612

APPENDIX A (CONTINUED)

CLUSTER NUMBER TEN (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1964	Georgetown College	KY	1067
1969	Kentucky Wesleyan College	KY	564
1987	Transylvania University	KY	649
2028	Saint Mary's Dominican Clg.	LA	573
2118	Assumption College	MASS	1414
2143	Curry College	MASS	850
2145	Eastern Nazarene College	MASS	837
2217	Stonehill College	MASS	1853
2234	Adrian College	MICH	987
2239	Aquinas College	MICH	1240
2273	Hope College	MICH	2073
2282	Madonna College	MICH	1055
2308	Olivet College	MICH	788
2318	Spring Arbor College	MICH	769
2334	Augsburg College	MINN	1616
2337	Bethany Lutheran College	MINN	229
2342	Clg. of Saint Catherine	MINN	1648
2344	Clg. of Saint Teresa	MINN	1034
2380	Clg. of Saint Thomas	MINN	2187
2397	Belhaven College	MISS	678
2447	William Carey College	MISS	869
2460	Culver-Stockton College	MO	600
2482	Maryville College	MO	776
2489	Missouri Valley College	MO	565
2502	Southwest Baptist College	MO	1233
2513	Tarkio College	MO	551
2525	William Woods College	MO	1032
2540	College of Saint Mary	NEBR	480
2543	Dana College	NEBR	561
2553	Midland Lutheran College	NEBR	683

APPENDIX A (CONTINUED)

CLUSTER NUMBER TEN (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
2563	Union College	NEBR	741
2572	Colby Clg.-New Hampshire	NH	619
2584	Notre Dame College	NH	317
2586	Rivier College	NH	694
2587	Saint Anselm's College	NH	1569
2598	Caldwell College	NJ	592
2610	Felician College	NJ	475
2709	Condordia College	NY	507
2716	Eisenhower College	NY	590
2805	Roberts Wesleyan College	NY	605
2821	Saint John Fisher College	NY	1436
2910	Belmont Abbey College	NC	635
2914	Catawba College	NC	1090
2927	Elon College	NC	1967
2929	Gardner-Webb College	NC	1507
2941	Lenoir-Rhyne College	NC	1286
2944	Mars Hill College	NC	1524
2945	Meredith College	NC	1295
2946	Methodist College	NC	589
2951	N.C. Wesleyan College	NC	466
2955	Pfeiffer College	NC	837
2967	Saint Andrews Presb. Clg.	NC	630
3035	Ohio Dominican Clg.	OHIO	750
3045	Findlay College	OHIO	854
3048	Heidelberg College	OHIO	1120
3066	Lake Erie College	OHIO	646
3072	Malone College	OHIO	750
3073	Marietta College	OHIO	1725
3111	Edgecliff College	OHIO	724
3121	Tiffin University	OHIO	518

APPENDIX A (CONTINUED)

CLUSTER NUMBER TEN (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
3134	Ursuline College	OHIO	295
3135	Walsh College	OHIO	640
3149	Bethany Nazarene College	OKLA	886
3151	Bartlesville Wesleyan Clg.	OKLA	318
3194	George Fox College	OKLA	454
3262	Elizabethtown College	PA	1642
3270	Gwynedd-Mercy College	PA	693
3276	Immaculata College	PA	765
3293	Lycoming College	PA	1469
3301	Moravian College	PA	1401
3368	Saint Vincent College	PA	895
3376	Thiel College	PA	995
3387	Villa Maria College	PA	471
3391	Waynesburg College	PA	851
3392	Westminster College	PA	1678
3405	Mount Saint Joseph Clg.	RI	113
3419	Baptist Clg. at Charleston	SC	1591
3422	Central Wesleyan College	SC	334
3430	Columbia College	SC	855
3436	Limestone College	SC	479
3440	Newberry College	SC	844
3461	Dakota Wesleyan University	SD	427
3469	Sioux Falls College	SD	501
3476	Yankton College	SD	316
3479	Belmont College	TENN	935
3482	Christian Bros. Clg.	TENN	715
3486	David Lipscomb College	TENN	2121
3500	Lee College	TENN	1073
3511	Milligan College	TENN	802
3525	Tenn. Wesleyan College	TENN	396

APPENDIX A (CONTINUED)

CLUSTER NUMBER TEN (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
3536	Bryan College	TENN	546
3560	Dallas Baptist College	TEX	1122
3575	Howard Payne College	TEX	1404
3576	Houston Baptist College	TEX	1054
3578	Incarnate Word College	TEX	1167
3621	Saint Edward's University	TEX	1231
3641	Texas Lutheran College	TEX	1063
3681	Westminster College	UTAH	839
3685	Saint Joseph The Provider Clg.	VT	238
3704	Bridgewater College	VA	784
3736	Roanoke College	VA	1124
3783	Northwest College	WASH	526
3794	Saint Martin's College	WASH	624
3818	Morris Harvey College	W VA	1511
3831	Wheeling College	W VA	566
3838	Alverno College	WIS	673
3839	Carthage College	WIS	1428
3865	Milton College	WIS	426
3869	Mount Mary College	WIS	823
3875	Northland College	WIS	667
3938	Inter American, San German	PR	3866
6858	Unity College	ME	300
7032	Mid America Nazarene Clg.	KANS	883
7893	Flagler College	FLA	547
8849	Palm Beach Atlantic Clg.	FLA	409
8860	School for International Training	VT	323
9058	Bethel College	MINN	1414
10256	Benedictine College	KANS	923

APPENDIX A (CONTINUED)

CLUSTER NUMBER ELEVEN

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1183	Holy Names College	CAL	480
1351	Colorado Women's College	COLO	623
1375	Annhurst College	CONN	299
1409	Saint Joseph College	CONN	741
1556	Brenau College	GA	392
1700	Judson College	ILL	357
1790	Concordia Senior College	IND	336
1835	Saint Mary-of-the-Woods Clg.	IND	345
1943	Saint Mary College	KANS	440
1945	Sterling College	KANS	469
2347	Concordia Clg., Saint Paul	MINN	624
2361	Dr. Martin Luther College	MINN	662
2979	Warren Wilson College	NC	396
3085	Notre Dame College	OHIO	356
3190	Columbia Christian College	OREG	200
3208	Northwest Christian College	OREG	439
3420	Benedict College	SC	1270
3464	Huron College	SD	323
3605	Dominican College	TEX	214
3777	Fort Wright Clg. of Holy Names	WASH	294
3848	Edgewood College	WIS	417
3861	Marian Clg. of Fond Du Lac	WIS	432
3987	La Roche College	PA	498
4548	Hawaii Loa College	HAWA	204
7021	Northwood Inst. Ind. Br.	IND	159
8848	Warner Southern College	FLA	173
9401	Rockmont College	COLO	153

APPENDIX A (CONTINUED)

CLUSTER NUMBER TWELVE

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1088	Arkansas College	ARK	454
1276	Lone Mountain College	CAL	576
1342	Whittier College	CAL	1400
1586	Oglethorpe College	GA	796
1605	Chaminade Clg. of Honolulu	HAWA	1185
1683	George Williams College	ILL	1032
1722	McKendree College	ILL	586
1725	Monmouth College	ILL	732
1731	Mundelein College	ILL	871
1734	North Central College	ILL	827
1834	Saint Joseph Calumet College	IND	955
1893	Upper Iowa University	IOWA	500
1918	Friends University	KANS	812
1937	Ottawa University	KANS	668
1958	Brescia College	KY	603
2001	Thomas More College	KY	1041
2096	Saint Mary's University	MD	419
2284	Marygrove College	MICH	698
2341	Clg. of Saint Benedict	MINN	1440
2343	Saint Scholastica, College	MINN	1074
2345	College of Saint Thomas	MINN	2187
2523	Westminster College	MO	734
2534	Rocky Mountain College	MONT	500
2644	Upsala College	NJ	1348
2968	Saint Augustines College	NC	1470
3041	Defiance College	OHIO	655
3120	Saint John Clg., Cleveland	OHIO	509
3198	Linfield College	OREG	973
3233	Alvernia College	PA	269
3259	Eastern College	PA	557

APPENDIX A (CONTINUED)

CLUSTER NUMBER TWELVE (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
3297	Mercyhurst College	PA	1308
3357	Point Park College	PA	1190
3528	Union University	TENN	1131
3564	East Texas Baptist College	TEX	702
3654	University of Saint Thomas	TEX	1395
3986	Allntwn Clg., Saint Fran Desals	PA	559
7279	Hawaii Pacific College	HAWA	509
8419	Mercer University in Atlanta	GA	641

APPENDIX A (CONTINUED)
 CLUSTER NUMBER THIRTEEN

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
1033	Oakwood College	ALA	962
1236	Menlo College	CAL	517
1253	Pacific College	CAL	383
1264	Pepperdine University	CAL	7711
1293	Southern California Clg.	CAL	592
1339	Western Baptist Bible Clg.	OREG	466
1356	Coretto Heights College	COLO	688
1678	Eureka College	ILL	430
1741	Olivet Nazarene College	ILL	1495
1832	Saint Francis College	IND	757
1838	Taylor University	IND	1416
1946	Tabor College	KANS	515
2045	Nasson College	ME	685
2050	Saint Francis College	ME	482
2056	Westbrook College	ME	503
2067	Columbia Union College	MD	704
2086	Mount Saint Mary's College	MD	1199
2117	Anna Maria College	MASS	550
2153	Gordon College	MASS	979
2286	Mercy College of Detroit	MICH	1451
2371	Northwestern College	MINN	547
2463	Evangel College	MO	1112
2464	Frontbonne College	MO	656
2512	Stephens College	MO	1870
2526	Carroll College	MONT	1100
2577	Mount Saint Mary College	NH	200
2579	New England College	NH	1385
2599	Centenary Clg. for Women	NJ	467
2649	Clg. of Santa Fe	NM	876
2676	Briarcliff College	NY	285

APPENDIX A (CONTINUED)

CLUSTER NUMBER THIRTEEN (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
2744	Keuka College	NY	576
2745	King's College	NY	759
2747	Ladycliff College	NY	449
2755	Long Island University	NY	1176
2765	Marist College	NY	1496
2778	Mount Saint College	NY	768
2808	Rosary Hill College	NY	1050
3025	Cedarville College	OHIO	1006
3036	Clg. of Steubenville	OHIO	835
3110	Otterbein College	OHIO	1150
3142	Wilmington College	OHIO	658
3165	Okla. Christian College	OKLA	1096
3212	Pacific University	OREG	995
3241	Cabrini College	PA	440
3298	Messiah College	PA	849
3303	Carlow College	PA	828
3457	Wofford College	SC	992
3484	Covenant College	TENN	522
3499	Lane College	TENN	668
3524	Tenn. Temple College	TENN	1613
3619	Southwestern Union Clg.	TEX	637
3695	Trinity College	VT	438
3699	Windham College	VT	748
3702	Averett College	VA	908
3752	Va. Intermont College	VA	485
5766	Va. Union University	VA	1139
3767	Va. Wesleyan College	VA	613
3806	Alderson Broaddus College	W VA	875
4661	Hampshire College	MASS	1318
4795	Kirkland College	NY	638

APPENDIX A (CONTINUED)

CLUSTER NUMBER THIRTEEN (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>LOCATION</u>	<u>FALL FTE</u>
4917	Roger Williams College	RI	1393
5019	Antillian College	PR	470
8146	Ft. Lauderdale University	FLA	145
11624	Southern Bible College	TEX	181

APPENDIX B
PER FTE REVENUE VARIABLES

FIGE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
1008	2485	1550	392	0	516	3001
1012	4240	1653	1478	228	783	5252
1014	1909	596	378	1003	168	3080
1019	3659	1731	1222	210	1160	5029
1023	3376	1262	760	0	197	3573
1028	3375	1195	619	309	361	4045
1029	1529	1004	500	81	240	1849
1033	2823	1535	912	196	1503	4522
1037	1372	469	474	361	489	2223
1041	2723	1505	548	216	1131	4069
1043	2240	1371	753	312	1146	3698
1044	2770	1210	759	763	796	4330
1074	1407	939	457	88	415	1910
1088	2790	1461	643	653	686	4129
1094	2625	812	1012	0	636	3261
1099	2438	1330	411	104	673	3216
1100	3328	1302	650	132	1729	5188
1103	3393	929	388	566	387	4347
1117	2937	2209	570	71	817	3825
1122	2191	1521	622	72	664	2927
1125	2172	1203	874	95	815	3082
1133	3181	2371	574	167	770	4118
1164	3145	2471	0	409	357	3912
1179	2377	1985	248	111	454	2943
1180	8 1838	1240	1 1598	0	0	8 1838
1183	3900	1950	1081	166	1373	5439
1196	2588	1922	589	97	665	3349
1213	3544	2049	975	504	93	4142
1216	2897	2727	52	99	152	3149
1220	1931	1132	570	0	691	2622
1236	2934	2538	206	107	1303	4344
1243	2867	1817	805	74	606	3547
1253	3590	2559	379	438	962	4989
1255	5261	3305	898	317	186	5763
1258	2290	2006	203	536	3724	6550
1262	2187	1512	503	137	721	3045
1264	2073	1877	3	26	223	2322
1276	2348	1948	128	323	564	3235
1291	1600	1083	426	76	663	2339
1293	2293	1412	183	89	733	3116
1302	3296	2313	956	169	1041	4506
1303	3929	1011	2919	0	1577	5507
1339	1570	1238	222	0	823	2393
1341	3120	2436	445	153	1288	4561
1342	3139	2588	228	662	537	4338
1351	4618	2894	1621	316	1942	6876
1356	3005	2312	130	231	1576	4811
1367	3603	938	2470	19	1227	4849
1375	3001	1793	1031	78	1279	4359
1407	3661	187	0	727	630	5018
1409	3311	1784	595	141	677	4129
1452	4534	2841	805	70	2812	7417
1466	2899	2014	531	74	606	3579
1467	2424	1275	812	60	737	3221
1478	2295	822	485	98	28	2420

APPENDIX B (CONTINUED)

FACE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
1488	2683	1828	517	273	1359	4316
1526	2465	2126	177	72	520	3058
1554	3002	1196	322	149	1397	4548
1556	3077	1519	986	100	1076	4265
1559	4314	1323	737	473	522	5309
1582	3088	1358	493	490	737	4316
1583	2716	1321	741	328	703	3748
1586	2726	2503	180	414	543	3683
1587	4051	1474	917	1384	652	6086
1588	2091	988	752	0	450	2541
1591	2029	1352	471	0	586	2615
1594	3494	1372	957	535	908	4937
1595	1394	851	291	358	501	2253
1600	2796	1592	367	14	1128	3938
1605	1582	1303	166	125	75	1783
1617	2637	2024	491	184	818	3639
1624	1990	1460	467	165	851	3005
1632	3242	1042	1905	0	1752	4994
1634	2748	1859	645	181	694	3623
1635	2606	1862	529	42	1078	3725
1663	1952	165	1630	0	0	1952
1664	2210	1685	386	15	491	2716
1665	1569	1445	33	16	21	1607
1670	1830	752	1038	0	0	1830
1676	2411	2208	83	76	492	2978
1678	3120	1832	437	78	1280	4478
1683	2881	1718	795	624	592	4097
1684	2497	1816	421	10	831	3338
1685	5312	1415	2923	801	571	6684
1688	1999	1506	86	128	643	2769
1700	3822	1855	1594	329	1290	5441
1722	2716	2044	334	695	700	4111
1725	4152	3086	458	787	1150	6089
1731	3396	2110	761	677	598	4671
1734	3033	2184	592	664	777	4474
1735	2707	1960	571	490	765	3962
1741	1988	1534	369	0	912	2900
1745	2338	1773	294	77	850	3265
1767	2776	1871	369	114	744	3634
1768	2532	1813	164	0	506	3038
1771	1999	1191	658	16	533	2548
1772	2200	1785	405	94	891	3184
1785	2735	1760	394	204	810	3749
1787	2122	1427	541	4	530	2655
1790	2816	859	1957	140	1645	4601
1798	3310	1804	1121	0	755	4064
1799	2820	1973	518	81	820	3721
1800	1923	1378	336	126	771	2820
1803	2604	1594	786	259	843	3706
1821	2639	1697	699	407	771	3817
1822	2202	1674	289	193	676	3070
1824	2182	1415	668	68	568	2817
1832	1885	1453	61	31	362	2279
1833	2691	1800	485	269	1328	4289
1834	1858	1246	239	92	116	2066

APPENDIX B (CONTINUED)

FIGE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
1835	4133	1973	1886	342	1115	5591
1837	2137	1146	1017	249	1232	3617
1838	2322	1878	252	25	1158	3505
1846	2233	1660	434	12	421	2666
1847	2377	1927	290	251	705	3333
1852	3300	2225	878	542	1206	5048
1854	3157	2470	144	472	850	4479
1858	6518	1236	3475	712	1434	8664
1859	1940	1479	338	93	521	2553
1866	2169	1557	383	48	855	3073
1871	3062	2142	782	161	641	3863
1873	2251	1808	144	250	770	3271
1874	2918	2231	253	170	1152	4240
1876	2132	1504	339	204	575	2911
1880	2422	1441	537	0	471	2892
1883	2272	1642	455	151	721	3144
1887	3547	2435	498	194	798	4539
1889	2672	1764	854	20	515	3207
1891	2587	1756	554	78	713	3378
1893	2972	2417	384	565	548	4086
1896	2722	2057	373	72	945	3739
1899	2765	1960	615	45	687	3498
1900	2812	2269	242	177	895	3884
1903	2327	1468	426	80	682	3089
1904	2163	1417	516	156	957	3276
1905	2634	1385	726	129	737	3500
1918	2209	1308	604	379	278	2867
1929	2834	1515	849	262	839	3935
1932	2086	1383	0	40	871	2997
1933	2828	1665	731	94	1081	4004
1937	2859	1960	380	688	886	4433
1939	2216	1251	570	19	448	2683
1940	2590	1474	464	140	717	3447
1943	2829	1191	1437	139	864	3832
1944	2001	1215	572	0	628	2630
1945	2825	1276	949	308	959	4093
1946	2295	1465	579	80	839	3214
1952	2218	1704	250	241	857	3317
1954	2391	1783	516	240	383	3014
1958	1939	1187	636	29	163	2132
1959	2024	1180	579	109	664	2796
1960	2376	1419	720	39	463	2882
1962	1415	1224	122	176	533	2124
1964	2064	1589	286	94	1162	3319
1969	2371	1530	526	234	704	3309
1980	2482	956	430	118	494	3094
1987	3424	2354	755	101	822	4347
1988	2640	1726	346	113	655	3409
2001	1877	1313	386	107	183	2166
2003	2859	1474	656	169	844	3872
2004	2998	1183	721	297	487	3782
2007	2144	909	901	161	442	2748
2023	1373	668	652	9	72	1453
2027	3133	1273	297	119	891	4143
2028	2313	1481	570	42	604	2960

APPENDIX B (CONTINUED)

FIGE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
2032	3074	1467	617	649	384	4106
2045	3171	2936	113	61	1383	4614
2048	3843	3264	439	0	1471	5315
2050	3020	2598	15	71	1300	4391
2056	2131	1970	59	146	1378	3655
2067	3334	2354	860	6	1594	4934
2086	2135	1854	97	40	1082	3257
2096	2982	1450	1023	717	1138	4837
2110	17594	3076	14446	0	102	17696
2117	1408	1311	25	327	695	2430
2118	2582	2120	258	83	672	3337
2119	2385	1965	336	44	2169	4598
2132	4148	2975	770	449	1650	6247
2140	2471	1409	29	166	658	3296
2143	2660	2370	237	82	1003	3745
2145	1885	1435	326	365	770	3021
2153	2354	1898	232	54	1126	3534
2154	5411	702	2257	92	0	5503
2213	8773	0	8773	5376	1467	15617
2217	2227	2062	46	73	710	3011
2234	3236	2216	593	73	1151	4460
2236	3264	2248	585	176	1269	4708
2239	2792	1920	720	111	498	3401
2258	10048	1136	6814	456	1615	12120
2272	3795	2862	719	23	1106	4924
2273	2344	1550	319	463	818	3625
2282	1595	1066	275	203	264	2062
2284	3110	2150	577	582	478	4170
2286	2654	1879	366	325	1093	4072
2289	2124	1496	20	818	54	2996
2298	4127	1860	883	169	1275	5875
2308	2860	1972	782	173	971	4005
2318	2399	1661	685	15	913	3327
2321	4780	297	3153	2279	1112	8172
2334	2675	1905	456	314	843	3832
2337	1979	1019	892	109	1145	3233
2341	2620	1727	473	461	744	3826
2342	2447	1744	462	183	586	3216
2343	2690	1748	476	199	368	3257
2344	2874	1762	747	241	975	4089
2345	2937	1996	496	206	520	3663
2347	2374	877	1293	266	894	3533
2354	3438	2279	292	442	831	4712
2361	1987	522	1431	38	584	2609
2371	1311	947	338	47	926	2284
2380	2849	2021	403	246	1066	4161
2397	1808	1302	354	13	566	2388
2398	2550	1265	877	115	677	3342
2414	2274	1542	373	149	697	3120
2433	3491	980	932	533	805	4829
2447	1942	1219	499	41	545	2528
2453	2523	1475	611	121	703	3347
2460	2611	1778	678	152	728	3491
2463	1857	1105	257	67	935	2859
2464	2403	1776	140	138	346	2887

APPENDIX B (CONTINUED)

FACE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
2480	2144	1445	151	76	585	2805
2482	2466	1982	288	289	715	3470
2489	2502	1607	637	25	972	3498
2497	3484	933	2456	72	0	3556
2500	5914	778	726	325	838	7077
2502	1702	1155	473	25	685	2411
2508	4167	0	4167	347	3974	8488
2512	2487	2277	14	62	1091	3639
2513	2819	1933	662	392	1021	4232
2523	2783	2067	518	401	629	3814
2524	2173	1258	344	115	879	3167
2525	2312	1963	100	49	1220	3581
2526	2011	1212	235	20	665	2697
2534	2277	1358	612	418	748	3443
2540	2943	1613	937	208	852	4003
2543	2576	1825	458	84	807	3467
2544	2697	1764	430	39	980	3716
2548	2799	1828	670	79	612	3490
2550	4071	2294	1777	753	1062	5886
2553	2724	1739	716	235	567	3526
2555	2766	1712	609	106	598	3471
2563	1955	1413	387	80	1258	3293
2572	2807	2407	200	33	1519	4359
2574	3728	3088	161	34	546	4308
2575	2419	2260	32	0	987	3405
2577	3030	1930	740	97	1444	4571
2579	3157	2698	178	84	1238	4473
2584	2297	1540	662	138	653	3088
2586	2078	1388	514	48	387	2513
2587	2470	1896	282	284	743	3496
2592	10371	1710	8661	0	150	10521
2597	4723	3021	351	0	620	5343
2598	2724	1819	588	248	629	3601
2599	2519	2293	115	113	1831	4463
2602	2300	1912	0	68	0	2368
2610	2097	1225	433	130	205	2432
2644	2454	1800	240	809	811	4074
2649	2700	1757	261	284	605	3590
2676	4047	2678	801	100	1659	5806
2682	3150	1926	1197	0	1262	4412
2705	2761	1854	0	104	576	3441
2709	2171	1119	827	557	1265	3993
2713	1613	1098	343	103	7	1723
2716	4781	3256	1195	121	1782	6684
2744	3390	2703	65	353	1445	5188
2745	2471	2008	243	132	1245	3849
2747	2560	1837	434	23	1185	3768
2755	3097	2694	14	83	742	3921
2765	2773	2124	13	291	899	3963
2772	2757	2372	27	169	0	2926
2778	2513	1705	255	314	1305	4132
2790	1731	1450	0	0	996	2727
2805	2570	1914	495	196	1166	3932
2808	3124	2244	302	73	488	3685
2821	2595	2195	88	146	498	3240

APPENDIX B (CONTINUED)

FACE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
2825	2781	1734	757	25	83	2890
2832	2272	1547	408	0	134	2406
2898	3275	965	2006	19	1016	4310
2909	3597	934	1504	1345	803	5745
2910	1985	1270	464	222	689	2895
2911	4142	1193	1709	297	825	5264
2914	2047	1683	236	156	836	3039
2927	1512	1227	133	161	586	2260
2929	1829	1483	274	227	757	2813
2930	2900	1783	583	221	780	3900
2931	2523	1778	107	45	586	3154
2933	1921	1398	308	115	732	2768
2936	2993	1022	1113	519	843	4355
2941	2506	1833	389	210	855	3571
2942	2694	1037	914	483	623	3800
2944	2177	1469	316	209	732	3118
2945	2337	1758	353	193	1006	3536
2946	2182	1689	313	247	698	3126
2951	2686	1858	716	254	939	3880
2955	2812	1807	726	294	917	4023
2957	3002	2137	436	194	702	3898
2959	3076	1588	1348	0	870	3946
2962	2534	1356	51	99	492	3125
2967	3463	2423	551	288	1590	5341
2968	2053	1272	705	492	918	3462
2979	3152	1567	785	633	1293	5079
2990	2686	1606	530	0	917	3603
2992	4126	1307	697	425	691	5242
2998	1647	694	919	185	864	2695
3013	5258	860	1559	428	88	5773
3017	2443	774	76	445	453	3341
3025	1694	1440	212	17	1025	2736
3035	2734	1837	505	90	646	3470
3036	1923	1592	189	115	816	2855
3041	3287	2436	512	498	870	4654
3045	2781	2224	216	82	821	3684
3048	3058	2499	171	179	1130	4368
3066	3070	2329	553	109	623	3802
3072	2326	1800	465	51	781	3158
3073	2862	2453	253	215	833	3910
3083	3118	2367	241	0	1152	4269
3084	3464	2552	332	266	1019	4748
3085	3343	1332	1573	225	496	4064
3110	3261	2796	139	196	1162	4709
3111	1951	1437	425	339	547	2837
3116	2679	1737	338	0	941	3619
3120	2986	1921	990	412	529	3927
3121	903	894	1	0	213	1116
3134	2842	1554	1194	272	614	3728
3135	2041	1561	362	100	686	2827
3141	3916	1745	371	819	1029	5764
3142	3431	2393	326	451	1512	5394
3149	2669	1445	1155	124	851	3644
3151	1437	798	436	118	611	2166
3165	1785	1097	241	141	911	2837

APPENDIX B (CONTINUED)

FIGE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
3190	3760	1977	1586	267	1271	5297
3194	2595	1550	656	341	944	3880
3198	2377	2045	207	530	925	3832
3203	1703	1387	46	37	74	1814
3208	2108	699	1170	0	601	2709
3212	3253	2005	187	156	870	4279
3225	3053	1431	987	0	643	3696
3228	4486	589	504	218	442	5146
3233	1721	735	815	365	314	2399
3241	2046	1658	179	75	626	2747
3247	2760	1852	462	0	791	3551
3257	3694	621	2614	306	0	4001
3259	2718	2327	186	495	856	4069
3262	2927	2230	439	25	1108	4060
3270	2463	1757	513	0	558	3021
3275	2253	1504	626	0	182	2436
3276	2800	1776	900	48	1088	3935
3293	2472	2299	97	251	905	3627
3297	2133	1454	114	312	337	2783
3298	2648	1881	154	489	1240	4376
3301	2706	2431	157	297	817	3820
3303	3340	2401	328	280	828	4448
3357	3408	2834	323	537	598	4544
3365	4822	871	3292	453	0	5275
3368	2558	2129	201	600	1097	4255
3376	2885	2458	289	575	1304	4765
3387	3018	2006	730	539	941	4498
3391	2532	2174	125	163	796	3491
3392	2453	2032	126	325	863	3641
3394	2752	1957	126	0	428	3180
3405	2613	1829	672	82	622	3317
3411	1890	1596	12	72	585	2547
3419	1950	1427	275	90	575	2615
3420	3326	1612	1121	88	588	4002
3422	2141	1313	527	248	695	3084
3424	2603	1137	610	670	593	3866
3427	2709	2031	173	309	115	3133
3430	2205	1646	227	48	1192	3445
3431	3675	2668	784	0	1249	4924
3432	2166	1634	365	133	984	3283
3436	2243	1753	174	302	619	3164
3439	3037	1045	566	267	545	3850
3440	2876	1778	657	382	1050	4307
3445	2684	2017	508	242	1466	4392
3455	2710	961	582	547	681	3938
3457	2695	1947	383	121	1393	4209
3461	2410	1377	503	270	726	3407
3464	4106	1874	1148	332	818	5257
3465	2805	1319	650	285	702	3792
3469	2548	1895	466	77	610	3234
3476	3122	1878	782	381	1109	4612
3479	2181	1321	536	31	328	2540
3480	2325	1175	743	141	779	3244
3482	2460	1681	444	54	456	2970
3484	2401	1525	658	99	1149	3690

APPENDIX B (CONTINUED)

FIGE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
3486	2135	1800	217	121	834	3091
3490	4552	2025	849	424	1208	6184
3496	4006	1397	2132	145	777	4929
3498	2811	1719	534	52	837	3700
3499	2556	1418	312	490	793	3840
3500	1477	956	400	102	565	2145
3501	2096	782	542	428	103	2627
3502	1795	1051	198	148	750	2693
3505	2694	1704	394	108	1396	4198
3511	1480	1089	335	130	836	2447
3518	2191	1769	313	0	7340	9530
3524	1123	1037	54	18	968	2109
3525	2843	1647	777	80	741	3664
3526	1979	1210	579	0	841	2820
3527	2583	1385	236	140	1157	3880
3528	1718	1008	576	320	460	2499
3536	1475	1052	265	75	925	2475
3548	4515	1797	1255	1057	778	6350
3560	2129	1288	785	295	376	2849
3564	1694	942	417	396	584	2674
3575	1555	1015	288	47	806	2407
3576	2551	1373	897	261	402	3214
3577	3175	1083	909	397	721	4293
3578	2231	1589	296	55	367	2652
3584	1700	1441	0	0	1211	2911
3588	2449	1039	384	50	521	3019
3602	2991	947	528	0	613	3604
3605	2799	1229	1344	200	454	3453
3619	2281	1542	673	187	1336	3804
3620	2787	1546	350	237	952	3977
3621	2233	1505	250	350	683	3265
3637	6033	1438	491	31	839	6903
3638	3272	1276	655	395	721	4387
3641	2246	1443	489	93	780	3119
3651	4063	1974	1277	0	483	4546
3653	3565	2188	1269	232	751	4348
3654	1853	1335	316	257	190	2300
3663	2149	1041	536	148	761	3058
3681	1951	1288	526	129	331	2412
3685	1768	1243	408	265	547	2581
3692	3499	3030	37	174	2104	5777
3695	1917	1427	301	304	989	3211
3699	3677	3346	108	38	1054	4769
3702	1670	1217	363	42	471	2183
3704	2217	1865	97	210	1180	3606
3708	2979	1938	389	0	1013	3992
3709	2208	1458	375	125	910	3243
3720	2230	1748	166	55	942	3227
3733	2968	2232	413	129	906	4003
3736	2756	2113	277	143	1017	3917
3739	3199	1063	950	0	875	4075
3752	2549	1838	326	39	1274	3861
3766	2502	1648	234	240	758	3499
3767	2208	1954	0	266	681	3155
3777	3013	1280	1452	159	597	3770

APPENDIX B (CONTINUED)

FIGE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
3783	1288	1078	181	113	757	2158
3794	2368	1760	355	56	731	3155
3795	3185	824	2325	41	1617	4842
3806	3013	1855	296	324	1196	4533
3808	3210	2508	228	107	1380	4696
3811	2988	2171	464	182	1153	4322
3818	1637	1197	211	124	443	2204
3820	60	60	168	223	825	60
3831	2251	1604	610	254	1135	3641
3832	3874	1797	1029	123	456	4453
3837	2340	1383	823	0	436	2776
3838	2917	2396	288	185	1033	4134
3839	2584	1982	350	26	984	3594
3848	2600	1258	1167	153	662	3414
3850	2855	751	1339	303	628	3786
3854	2927	1987	767	0	1321	4248
3861	2698	1363	1179	23	472	3193
3865	2769	2157	539	269	672	3710
3869	2285	1100	947	62	530	2878
3873	3036	1504	752	0	629	3665
3875	2678	1701	771	46	700	3425
3911	1667	758	54	609	546	2822
3938	972	931	6	0	84	1056
3985	2412	1013	1336	74	1144	3629
3986	1901	1459	245	734	880	3515
3987	1924	900	763	498	602	3024
3988	3033	1437	1206	53	128	3214
4548	4440	1561	2628	188	546	5174
4601	1400	589	757	14	1174	2588
4661	3657	3195	67	155	962	4774
4795	4901	3071	1113	115	1157	6173
4917	2479	2061	29	50	612	3141
5019	967	526	341	68	724	1759
6858	1886	1758	60	53	702	2641
6975	946	849	24	0	64	1010
7021	2514	1704	695	164	1513	4191
7032	1644	1099	122	151	726	2520
7279	1134	508	478	67	51	1252
7732	5918	562	5268	0	851	6769
7890	3737	2402	1121	75	1041	4853
7893	2326	1437	872	44	717	3086
8146	5273	5047	131	210	677	6159
8419	1696	1215	291	164	115	1974
8848	2442	1089	1214	224	782	3449
8849	2362	1289	1033	240	501	3104
8860	4608	4107	324	63	829	5501
9058	1957	1584	288	100	753	2810
9192	1129	888	194	0	0	1129
9401	3538	1198	2281	270	515	4323
9640	3550	775	2775	153	580	4283
9743	1619	976	486	46	71	1735
9982	5021	1034	3604	299	2151	7471
10015	1183	912	16	304	2	1488
10256	2752	1794	791	309	1116	4177
10266	1680	0	0	297	546	2523

APPENDIX B (CONTINUED)

FICE CODE	TOTAL E&G REV.	STUD. TUIT & FEES	PRIV. GIFTS REV.	STUD. AID REV.	TOTAL AUX. ENTER REV.	TOTAL CURR. FUNDS REV.
10310	9900	619	8227	0	601	10501
10831	2198	930	349	403	0	2601
11385	7337	2044	5135	154	206	7696
11624	1410	874	455	28	913	2351

APPENDIX C
PER FTE EXPENDITURE AND ENDOWMENT VARIABLES

FIGE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
1008	2476	925	134	610	3220	2255
1012	3238	1369	570	551	4358	17461
1014	1401	0	1684	339	3424	0
1019	3442	1600	572	1095	5109	7426
1023	2715	1092	160	986	3860	3132
1028	3034	1030	593	380	4007	427
1029	1276	523	159	251	1686	81
1033	2895	1894	196	1531	4623	0
1037	1381	543	719	412	2512	0
1041	2961	1349	418	869	4248	4134
1043	2249	708	424	1032	3705	2078
1044	2617	1065	817	791	4225	2810
1074	1229	506	278	399	1906	100
1088	2604	1005	706	546	3855	3299
1094	2577	1535	182	619	3378	2326
1099	1971	923	173	722	2867	7732
1100	3128	1582	380	1621	5129	0
1103	2672	740	516	418	3606	1167
1117	2556	1094	416	779	3751	338
1122	1964	885	97	569	2630	509
1125	1693	630	309	604	2605	469
1133	2796	1111	382	721	3899	195
1164	2768	1608	255	261	3588	176
1179	2093	1005	199	435	2727	387
1180	42410	13427	0	50654	93064	0
1183	3684	1562	373	1209	5266	484
1196	2509	1415	67	732	3308	694
1213	3758	1471	806	210	4774	789
1216	2730	1670	315	143	3188	529
1220	1908	0	0	548	2456	0
1236	2745	1322	220	1276	4242	2796
1243	2622	1418	211	574	3407	704
1253	3242	1190	639	870	4751	431
1255	4417	1239	320	177	4914	1140
1258	1933	962	593	3456	5982	98
1262	2455	668	388	516	3359	384
1264	2027	927	148	136	2311	493
1276	2431	1222	446	592	3470	559
1291	1871	681	110	385	2367	0
1293	1615	670	636	637	2888	289
1302	3344	1356	316	1140	4800	1934
1303	3929	1214	0	1577	5507	0
1339	1791	467	59	605	2456	14
1341	2941	1430	322	1246	4509	652
1342	2728	1258	808	605	4142	3441
1351	4795	1908	846	905	6870	411
1356	4140	1280	466	731	5337	133
1367	3318	1158	0	1162	4480	717
1375	3976	1241	153	838	4966	0
1407	2136	222	727	1933	4796	66000
1409	3351	977	278	361	3990	512
1452	5305	1686	157	2379	7840	360
1466	2886	1294	221	530	3638	317
1467	2167	841	219	770	3156	919
1478	1769	825	489	138	2395	5958

APPENDIX C (CONTINUED)

FIGE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
1 488	2277	910	444	1620	4341	4773
1526	2287	1011	160	521	2967	772
1554	2810	916	295	1293	4398	14840
1556	3839	1247	188	554	4609	1250
1559	4209	1098	512	558	5279	1285
1582	2993	931	490	510	4294	5590
1583	2463	963	553	739	3755	1175
1586	2690	724	299	498	3486	4023
1587	3173	1454	1578	585	5336	663
1588	2013	868	128	557	2698	6244
1591	1914	853	261	445	2620	4087
1594	3580	1428	487	868	4935	6420
1595	1537	706	358	357	2252	3903
1600	3011	1318	441	883	4335	18170
1605	1647	872	58	88	1794	2
1617	2819	1145	538	674	4031	2418
1624	1661	649	323	651	2634	330
1632	4537	2958	0	684	5222	399
1634	2657	1081	292	674	3623	554
1635	3165	1235	326	821	4311	484
1663	1907	561	45	0	1952	2545
1664	2264	944	106	534	2905	120
1665	1511	772	66	11	1587	0
1670	1862	1439	0	0	1862	202
1676	2124	1165	209	585	2918	531
1678	2691	1038	271	1261	4224	3218
1683	2389	1039	515	569	3473	388
1684	2408	1102	159	846	3413	471
1685	4763	1849	801	1120	6684	0
1688	2038	1122	135	671	2845	6389
1700	3275	1162	645	1310	5231	3570
1722	2156	836	915	735	3806	2476
1725	3727	1886	1359	1136	6222	5834
1731	3058	1172	960	781	4799	735
1734	2830	894	798	777	4405	3382
1735	2329	1079	791	781	3901	720
1741	1936	913	48	900	2884	291
1745	1985	982	231	737	2953	577
1767	2905	771	212	500	3616	219
1768	2146	1037	240	496	2882	133
1771	1877	779	93	691	2661	62
1772	2075	834	191	911	3177	108
1785	2292	1064	375	666	3332	1339
1787	2257	732	224	335	2815	210
1790	3021	1377	140	1279	4439	0
1798	2728	1332	967	684	4379	13291
1799	2673	1455	266	781	3719	498
1800	1881	947	221	687	2790	266
1803	2065	824	471	810	3345	1638
1821	2596	1051	453	600	3649	1069
1822	2247	846	230	732	3208	470
1824	2034	1100	530	446	3010	525
1832	1911	1034	111	346	2367	0
1833	2757	0	541	1279	4577	862
1834	1838	754	124	103	2065	0

APPENDIX C (CONTINUED)

FACE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
1835	4959	1527	546	899	6403	2550
1837	2582	1036	249	1289	4119	1463
1838	2254	1065	85	1110	3450	1012
1846	2038	906	112	493	2643	163
1847	2132	843	387	691	3210	898
1852	3063	1442	544	1209	4815	2414
1854	3059	1522	472	996	4527	8684
1858	5947	2798	1140	1287	8374	2791
1859	1511	783	370	432	2313	624
1866	2163	877	71	843	3077	395
1871	2616	954	492	589	3696	1930
1873	2140	1001	250	839	3229	3569
1874	2456	1142	386	1047	3890	1004
1876	2046	986	226	425	2696	401
1880	2090	1268	89	528	2708	1648
1883	1875	838	400	682	2956	1438
1887	3448	1403	632	863	4943	8542
1889	2257	975	283	363	2903	1090
1891	2275	1158	305	783	3363	2728
1893	3066	1067	884	477	4271	1345
1896	2813	1245	289	791	3893	609
1899	2810	1026	224	813	3847	765
1900	2281	851	662	995	3938	3069
1903	2324	995	220	734	3277	5250
1904	1966	894	269	803	3038	1939
1905	2223	657	378	779	3380	3918
1918	2700	893	554	384	3637	1912
1929	2641	1061	410	739	3791	4078
1932	2540	1030	217	690	3448	1
1933	2340	1023	512	1152	4003	3970
1937	2934	1449	671	958	4562	2914
1939	2091	913	144	452	2687	238
1940	2102	848	387	618	3107	7832
1943	2745	1152	351	762	3857	1341
1944	2363	887	170	721	3253	0
1945	2794	831	346	958	4098	3085
1946	2083	769	0	714	2797	582
1952	1959	905	227	728	2915	4711
1954	2077	888	588	402	3067	115
1958	1803	916	198	125	2126	498
1959	2109	1002	155	507	2771	955
1960	2318	1219	68	522	2908	164
1962	1477	829	296	457	2230	747
1964	1931	996	291	1075	3297	2711
1969	2530	1259	339	733	3603	1026
1980	2705	1372	157	508	3370	2043
1987	3308	1210	448	457	4213	2519
1988	2747	1458	205	715	3666	3755
2001	1969	868	268	160	2397	398
2003	3167	1481	686	910	4763	9419
2004	2764	1085	495	521	3780	6810
2007	1928	881	268	446	2642	3419
2023	1312	590	42	69	1424	434
2027	3268	2203	180	677	4125	875
2028	2184	971	132	628	2944	1534

APPENDIX C (CONTINUED)

FACE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
2032	2903	1231	1003	569	4475	1109
2045	3303	1391	175	1026	4504	1051
2048	4531	1628	356	896	5783	698
2050	3437	991	218	991	4646	0
2056	2593	835	264	845	3702	397
2067	3145	1403	77	1599	4821	68
2086	1930	715	86	1116	3132	888
2096	3917	1296	385	1729	6031	15198
2110	14154	6142	0	1528	15683	0
2117	1802	720	216	745	2763	118
2118	2154	969	332	739	3225	540
2119	2614	1529	122	2103	4839	264
2132	4361	1533	415	1801	6577	7467
2140	2569	1362	299	735	3604	1029
2143	3041	908	290	643	3975	764
2145	1934	945	443	612	2988	220
2153	2333	747	173	990	3497	716
2154	4067	1511	1609	564	6239	0
2213	9453	0	4461	1467	15381	0
2217	1833	637	276	680	2790	555
2234	3168	1299	380	992	4540	2965
2236	3285	1516	253	1169	4707	4405
2239	2481	1352	298	495	3275	148
2258	7884	2912	358	3449	11690	30
2272	3393	1658	394	1191	4978	4981
2273	2694	1254	189	686	3569	1151
2282	1000	413	408	225	1633	99
2284	2949	1095	582	409	3939	1064
2286	2397	959	306	1087	3790	281
2289	2124	418	818	54	2996	0
2298	4070	1579	201	1116	5721	277
2308	2577	1029	481	790	3848	1545
2318	2304	1051	197	816	3317	146
2321	4629	1857	3028	1169	8826	0
2334	2058	1002	569	768	3395	419
2337	1948	723	222	988	3158	97
2341	2345	1000	680	761	3785	157
2342	2047	1038	360	706	3113	984
2343	2323	1002	533	454	3309	680
2344	2529	1183	422	918	3869	859
2345	2701	1165	403	493	3598	2840
2347	2302	1002	266	825	3392	38
2354	3167	1483	874	891	4932	11056
2361	1864	771	38	707	2609	0
2371	1496	513	0	1018	2514	0
2380	3019	1014	350	895	4263	86
2397	1731	709	169	468	2368	1835
2398	2714	1366	133	867	3714	5571
2414	2379	1144	268	699	3347	4615
2433	3398	1726	638	748	4784	1195
2447	1701	863	164	599	2464	663
2453	2626	1344	234	597	3456	5964
2460	2608	937	423	712	3743	1916
2463	1807	584	185	855	2847	53
2464	1975	805	326	239	2540	0

APPENDIX C (CONTINUED)

FIGE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
2480	2741	1191	293	495	3529	7624
2482	2482	909	533	429	3445	415
2489	2264	1122	325	974	3563	2675
2497	3370	1800	78	0	3448	94
2500	5311	1251	0	815	6126	50207
2502	1773	594	305	464	2541	65
2508	4209	1272	347	2472	7028	0
2512	2643	1352	128	1139	3910	1619
2513	3014	1057	498	841	4354	0
2523	2690	989	604	649	3942	3762
2524	1935	992	488	751	3174	6855
2525	2188	874	247	943	3378	1009
2526	1774	933	110	800	2685	1865
2534	2310	1123	557	809	3676	2743
2540	2641	1124	314	1057	4012	147
2543	2336	1050	294	821	3451	683
2544	2360	1163	693	823	3875	5147
2548	2727	1311	468	407	3602	5146
2550	2457	0	1745	1332	5533	0
2553	2491	1053	496	534	3521	1510
2555	2405	1578	453	611	3469	4312
2563	2402	1641	159	1047	3608	18
2572	2978	1200	184	1252	4414	3245
2574	3520	1103	552	519	4591	416
2575	2694	1373	0	766	3460	123
2577	3179	1891	154	1659	4991	144
2579	2843	1216	281	1113	4237	148
2584	2038	1437	288	657	2984	614
2586	1571	724	101	517	2189	245
2587	2376	1027	437	716	3529	0
2592	9967	4583	270	4	10241	0
2597	4701	1889	312	649	5662	1282
2598	2467	1052	432	693	3591	549
2599	3235	1384	136	1814	5184	500
2602	2593	638	0	0	2593	0
2610	1895	973	175	186	2256	195
2644	2771	1239	681	779	4231	626
2649	2448	1253	449	599	3496	218
2676	5563	1946	305	2249	8118	380
2682	6006	2821	1092	1461	8560	0
2705	2411	1076	212	589	3212	338
2709	2259	959	547	1130	3935	422
2713	1593	814	104	16	1713	0
2716	3992	1687	753	2003	6748	1705
2744	4057	1442	659	1433	6149	1063
2745	2481	810	217	1109	3806	155
2747	2256	1331	213	1490	3960	57
2755	2812	1389	413	817	4042	0
2765	2509	812	376	881	3765	356
2772	2240	993	248	148	2637	684
2778	2385	1077	306	1292	3983	213
2790	1777	626	29	914	2720	633
2805	2409	1105	276	794	3479	184
2808	2458	1413	258	866	3582	95
2821	2474	1057	226	552	3253	693

APPENDIX C (CONTINUED)

FIGE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
2825	2627	1063	97	77	2801	534
2832	1982	919	121	169	2272	6
2898	3264	1106	51	1162	4477	5207
2909	3107	740	254	658	4018	0
2910	1928	604	374	719	3021	929
2911	3951	1387	608	773	5332	4399
2914	2140	905	235	678	3052	2192
2927	1404	561	187	512	2103	1633
2929	1950	852	297	539	2785	1132
2930	3022	1456	323	681	4026	4491
2931	2127	1043	435	582	3143	4096
2933	1783	847	203	1065	3051	4335
2936	2793	941	519	882	4194	957
2941	2482	1778	296	792	3570	1672
2942	2600	649	801	544	3945	734
2944	2051	915	388	675	3114	411
2945	2254	846	297	661	3211	2126
2946	2015	823	273	957	3244	1053
2951	2792	1211	201	979	3972	1024
2955	2433	1038	308	813	3554	2539
2957	4187	1673	235	744	5166	8335
2959	4431	1377	267	613	5311	21
2962	2310	938	411	451	3172	32
2967	4209	1785	357	1072	5637	3168
2968	1631	545	794	884	3310	736
2979	3755	1539	495	1379	5628	2782
2990	2193	1189	510	846	3588	4891
2992	3463	1086	483	642	4589	82
2998	1302	0	224	690	2216	227
3013	4878	1727	428	967	6272	0
3017	2141	649	543	646	3330	1789
3025	1704	674	56	752	2513	72
3035	2539	930	267	662	3468	275
3036	1722	689	188	972	2883	273
3041	3193	1308	660	981	4834	1349
3045	2461	1096	313	859	3634	1557
3048	2720	1263	474	1171	4365	4152
3066	2873	1513	221	645	3739	3714
3072	2225	784	137	780	3142	647
3073	2518	1277	581	797	3896	3236
3083	2453	1268	465	1205	4123	5021
3084	3233	1711	613	1033	4880	6277
3085	2660	1369	247	379	3286	487
3110	3001	1340	278	1140	4517	2558
3111	2041	912	387	583	3011	287
3116	2425	921	520	985	3930	1414
3120	3015	1854	797	449	4262	0
3121	962	349	36	161	1158	143
3134	2619	947	501	605	3725	0
3135	1840	720	263	744	2847	68
3141	4274	771	832	1084	6191	117
3142	3340	1329	586	1560	5487	3194
3149	1811	911	227	690	2728	1041
3151	1301	384	289	519	2110	0
3165	1536	577	301	867	2705	1155

APPENDIX C (CONTINUED)

FACE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
3190	3769	1001	653	894	5316	
3194	2339	866	436	917	3692	1149
3198	2712	1301	636	530	3879	1613
3203	1075	728	37	492	1610	2015
3208	1467	543	66	584	2117	727
3212	3259	1179	457	674	4389	731
3225	2804	826	502	603	3909	66
3228	3318	1697	250	1148	4717	44584
3233	1413	698	365	302	2080	743
3241	2520	1193	179	869	3568	61
3247	2376	945	288	773	3437	229
3257	5691	2904	0	0	5691	8085
3259	2924	858	495	635	4054	1443
3262	2543	2217	163	1158	3694	1088
3270	2316	987	89	666	3071	245
3275	1682	986	257	193	2131	956
3276	2428	1240	406	1167	4001	291
3293	2081	1090	599	814	3494	2016
3297	1903	735	554	244	2701	7
3298	2594	780	660	1224	4478	1484
3301	2662	1148	297	835	3794	3418
3303	2962	977	571	812	4345	461
3357	3520	1427	537	339	4395	540
3365	5038	3234	237	0	5275	12951
3368	2586	1110	609	1051	4247	658
3376	2988	1165	828	1238	5053	1517
3387	2879	1321	682	860	4421	169
3391	2363	1283	317	1009	3690	3063
3392	2528	1259	430	697	3655	3353
3394	2679	1150	149	370	3199	1167
3405	2335	1460	108	401	2844	1549
3411	2233	0	72	565	2870	20
3419	2002	873	385	574	2961	279
3420	1949	701	237	713	2900	694
3422	1954	877	378	604	2936	667
3424	2093	762	991	561	3645	739
3427	2458	929	381	602	3440	10322
3430	2368	1145	126	729	3223	2497
3431	3560	1644	338	1055	4952	2450
3432	1955	890	267	1016	3238	4169
3436	2765	1187	615	717	4097	1204
3439	2746	550	99	459	3304	71
3440	2951	1182	491	976	4417	1380
3445	2521	1199	283	1486	4500	4327
3455	2625	723	642	418	3685	130
3457	2303	1012	369	1513	4185	3333
3461	2253	978	430	710	3394	3630
3464	4172	1740	541	914	5627	1764
3465	2959	139	407	578	3944	119
3469	2349	1273	250	534	3133	1578
3476	3559	1275	658	1285	5502	1328
3479	2074	1054	142	259	2475	1214
3480	2335	1162	558	746	3639	4066
3482	2286	991	270	412	2968	113
3484	2070	789	233	990	3439	198

APPENDIX C (CONTINUED)

FIGE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
3486	2084	1020	212	757	3053	1861
3490	4714	1473	1099	1386	7200	2452
3496	3697	1461	479	752	4929	4464
3498	2278	1064	353	855	3485	4153
3499	2431	1166	673	876	3979	593
3500	1598	670	143	424	2165	797
3501	1817	544	613	219	2649	0
3502	1672	562	148	618	2438	4672
3505	2692	1207	167	1311	4170	5319
3511	2059	849	172	536	2766	1602
3518	2083	1078	72	7250	9405	4
3524	1005	316	68	772	1845	0
3525	2621	1106	284	805	3710	2367
3526	2046	895	63	826	2935	343
3527	3276	1146	358	1365	4999	3591
3528	1588	753	312	392	2293	1558
3536	1718	768	196	578	2493	1176
3548	4183	2690	1186	1119	6488	688
3560	2104	955	276	603	2982	814
3564	1649	734	387	621	2656	2859
3575	1831	954	174	699	2703	0
3576	2301	1202	340	579	3220	2255
3577	3417	896	320	786	4523	894
3578	1761	968	342	287	2390	1208
3584	1911	883	106	878	2895	3519
3588	2246	911	152	483	2881	4432
3602	2292	1128	956	461	3709	168
3605	3226	1795	184	273	3682	878
3619	2017	974	161	1384	3562	655
3620	2564	1256	280	1131	3975	17438
3621	2339	865	550	768	3657	93
3637	2960	1156	250	2159	5369	2412
3638	2929	1071	556	809	4294	683
3641	1937	831	264	667	2868	852
3651	2381	1325	653	498	3532	8147
3653	5797	2884	505	627	6928	133333
3654	2018	933	206	145	2369	1298
3663	2037	887	375	643	3054	4857
3681	1833	858	240	331	2404	377
3685	1897	659	45	666	2607	0
3692	3856	1340	191	2126	6173	6304
3695	1720	767	304	1154	3178	0
3699	3595	1610	116	971	4682	75
3702	1626	612	0	416	2043	102
3704	2269	1148	210	1060	3539	2057
3708	2588	1140	494	897	3979	556
3709	2206	984	193	790	3189	4960
3720	2035	1083	176	893	3104	3992
3733	3033	1289	314	896	4243	5267
3736	2545	1147	231	975	3751	2898
3739	2800	1053	494	730	4025	981
3752	2703	1215	132	958	3794	687
3766	3545	939	142	754	4441	1177
3767	1993	977	392	570	2954	215
3777	2970	1300	363	412	3745	518

APPENDIX C (CONTINUED)

FIGE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
3783	1228	461	200	641	2069	50
3794	2033	927	178	799	3010	1411
3795	4256	2203	69	1109	5433	0
3806	2944	1126	551	853	4347	1168
3808	2854	1196	560	1192	4607	8547
3811	2625	1030	447	1240	4312	1741
3818	1655	653	175	555	2386	2208
3820	67	32	603	818	67	1658
3831	2844	1712	515	1115	4473	187
3832	4277	1707	162	466	4905	368
3837	2162	860	76	436	2674	296
3838	2493	1096	632	951	4076	2423
3839	2165	1056	353	1067	3584	3123
3848	2769	1325	153	390	3312	0
3850	2808	1537	303	554	3666	0
3854	2445	1040	482	1258	4185	561
3861	2658	1660	44	471	3173	0
3865	2977	1298	825	916	4718	374
3869	1937	1166	112	790	2839	543
3873	4756	1214	148	630	5533	0
3875	2662	1003	370	700	3731	2067
3911	2584	1137	72	556	3096	1
3938	948	362	25	83	1056	59
3985	2281	759	181	914	3375	4589
3986	2928	1532	465	632	4025	111
3987	1859	450	91	420	2370	0
3988	2349	1039	371	169	2889	3479
4548	3736	1283	116	889	4742	622
4601	2149	1138	14	356	2520	0
4661	3490	1412	330	1065	4885	379
4795	3857	1160	578	1732	6168	232
4917	2396	1299	226	659	3281	111
5019	1072	683	0	742	1813	0
6858	1946	758	183	608	2737	0
6975	957	179	0	53	1010	0
7021	3104	824	240	839	4183	0
7032	1592	600	235	507	2334	207
7279	1137	549	91	51	1278	0
7732	5523	1772	0	1125	6648	0
7890	1987	0	260	986	3233	252
7893	1829	543	388	487	2704	6
8146	5689	2287	297	675	6661	0
8419	1659	887	198	97	1954	1724
8848	2190	691	205	771	3166	68
8849	2504	1110	488	506	3498	0
8860	4462	3077	255	800	5517	972
9058	1793	805	284	671	2748	329
9192	696	438	20	28	743	0
9401	1640	644	375	395	2410	0
9640	3076	0	153	744	3973	0
9743	1216	549	41	373	1630	0
9982	3851	0	233	2098	6183	3192
10015	1013	566	383	8	1404	0
10256	2693	1211	468	1006	4167	657
10266	1200	366	421	327	1948	0

APPENDIX C (CONTINUED)

FICE CODE	TOTAL E&G EXPND.	DEPT. RES. EXPND.	STUD. AID GRANT EXPND.	TOTAL AUX. ENTER EXPND.	TOTAL CURR. FUNDS EXPND.	END. MKT. VALUE ENDOW.
1 0 3 1 0	6 5 6 9	1 2 6 6	3 3 9	5 5 8	7 4 6 6	0
1 0 8 3 1	2 1 9 8	0	4 0 3	0	2 6 0 1	0
1 1 3 8 5	7 6 0 3	2 8 5 6	5 0 1	2 6 2	8 3 6 6	0
1 1 6 2 4	1 2 5 0	4 3 0	2 0	7 1 3	1 9 8 3	0

APPENDIX D
 CLUSTER INDEX OF THE 499 COLLEGES

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
3228	Acad. of the New Church	2
2234	Adrian College	10
3806	Alderson Broaddus Clg.	13
3986	Allntwn Clg., Saint Fran Desals	12
2236	Alma College	5
2592	Alma White College	1
3233	Alvernia College	12
3832	Alverno College	8
3838	Alverno College	10
10310	American Christian College	6
1785	Anderson College	10
2117	Anna Maria College	13
1375	Annhurst College	11
5019	Antillian College	13
2239	Aquinas College	10
1632	Aquinas Inst. of Theology	6
1088	Arkansas College	12
1952	Asbury College	5
2118	Assumption College	10
3013	Athenaeum of Ohio	1
1008	Athens College	8
2119	Atlantic Union College	8

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
2334	Augsburg College	10
1634	Aurora College	10
3702	Averett College	13
1117	Azusa Pacific College	10
1903	Baker University	5
3419	Baptist College at Charleston	10
1635	Barat College	10
2909	Barber Scotia College	9
1466	Barry College	10
3151	Bartlesville Wesleyan Clg.	10
10015	Bayamon Central University	1
2397	Belhaven College	10
1954	Bellarmino College	10
9743	Bellevue College	1
2910	Belmont Abbey College	10
3479	Belmont College	10
3420	Benedict College	11
10256	Benedictine College	10
2911	Bennett College	5
1554	Berry College	5
3808	Bethany College	5
1904	Bethany College	10
2337	Bethany Lutheran College	10
3149	Bethany Nazarene College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1905	Bethel College	5
3480	Bethel College	5
1787	Bethel College	8
9058	Bethel College	10
1467	Bethune Cookman College	10
1122	Biola College	10
1012	Birmingham Southern College	5
3548	Bishop College	6
2597	Bloomfield College	8
2398	Blue Mountain College	5
3017	Borromeo College of Ohio	9
2132	Bradford College	5
1556	Brenau College	11
1958	Brescia College	12
1846	Briar Cliff College	10
2676	Briarcliff College	13
3704	Bridgewater College	10
3536	Bryan College	10
1847	Buena Vista College	10
3241	Cabrini College	13
2598	Caldwell College	10
1125	California Baptist College	10
1133	California Lutheran College	10
1959	Campbellsville College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
3837	Cardinal Stritch College	8
3303	Carlow College	13
2526	Carroll College	13
3839	Carthage College	10
2914	Catawba College	10
2682	Catholic Immac. Conception	8
3025	Cedarville College	13
2599	Centenary College for Women	13
2003	Centenary College	5
2453	Central Methodist College	5
3422	Central Wesleyan College	10
1605	Chaminade Clg. of Honolulu	12
1164	Chapman College	9
3482	Christian Brothers College	10
3424	Claflin College	9
1559	Clark College	9
1852	Clarke College	10
1854	Coe College	5
3427	Coker College	1
2572	Colby College	10
1617	College of Idaho	10
3247	College of Misericordia	8
1179	College of Notre Dame	10
2140	College of our Lady of Elms	9

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
2341	College of Saint Benedict	12
2342	College of St. Catherine	10
1664	College of Saint Francis	10
2540	College of Saint Mary	10
2344	College of Saint Teresa	10
2380	College of Saint Thomas	10
2345	College of Saint Thomas	12
2705	College of Saint Rose	9
2649	College of Santa Fe	13
3036	College of Steubenville	13
11385	College of the Atlantic	6
1094	College of the Ozarks	5
1351	Colorado Womens College	11
3190	Columbia Christian College	11
1665	Columbia College	8
3430	Columbia College	10
2067	Columbia Union College	13
2347	Concordia Clg., Saint Paul	11
1790	Concordia Senior College	11
2709	Condordia College	10
3431	Converse College	8
1356	Coretto Heights College	13
3484	Covenant College	13
2460	Culver Stockton College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1962	Cumberland College	10
2143	Curry College	10
3461	Dakota Wesleyan University	10
3560	Dallas Baptist College	10
2543	Dana College	10
1014	Daniel Payne College	3
3486	David Lipscomb College	10
3041	Defiance College	12
1670	Delourdes College	1
2004	Dillard University	5
1858	Divine Word College	6
2544	Doane College	5
2713	Dominican College at Blauvelt	1
1196	Dominican Col. of San Rafael	10
3605	Dominican College	11
2602	Don Bosco College	1
1859	Dordt College	10
2361	Dr. Martin Luther College	11
2258	Duns Scotus College	6
3564	East Texas Baptist College	12
3259	Eastern College	12
3708	Eastern Mennonite College	8
2145	Eastern Nazarene College	10
3111	Edgecliff College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
3848	Edgewood College	11
1478	Edward Waters College	1
2716	Eisenhower College	10
3262	Elizabethtown College	10
1676	Elmhurst College	10
2927	Elon College	10
3709	Emory and Henry College	5
3432	Erskine College	5
1678	Eureka College	13
2463	Evangel College	13
2610	Felician College	10
3045	Findlay College	10
3490	Fisk University	9
7893	Flagler College	10
1488	Florida Southern College	5
2574	Franconia College	8
1798	Franklin College	5
2575	Franklin Pierce College	8
1918	Friends University	12
2464	Frontbonne College	13
8146	Ft. Lauderdale University	13
3777	Ft. Wright Clg. of Holy Names	11
2929	Gardner Webb College	10
3194	George Fox College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1683	George Williams College	12
1964	Georgetown College	10
2153	Gordon College	13
1799	Goshen College	10
1800	Grace Theol. Sem. and Clg.	10
1866	Graceland College	10
1074	Grand Canyon College	10
2930	Greensboro College	5
1684	Greenville College	10
2931	Guilford College	5
3270	Gwynedd Mercy College	10
2354	Hamline University	5
4661	Hampshire College	13
2548	Hastings College	5
4548	Hawaii Loa College	11
7279	Hawaii Pacific College	12
1685	Hebrew Theological College	6
3048	Heidelberg College	10
2154	Hellenic College	6
1099	Hendrix College	5
2933	Highpoint College	5
2272	Hillsdale College	5
10266	Hillsdale Free Will Baptist Clg.	6
3275	Holy Family College	8

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1183	Holy Names College	11
7732	Holy Redeemer College	6
2273	Hope College	10
3576	Houston Baptist College	10
3575	Howard Payne College	10
1019	Huntingdon College	5
1803	Huntington College	10
3464	Huron College	11
3577	Huston Tillotson College	9
1688	Illinois College	5
3267	Immaculata College	10
1213	Immaculate Heart College	8
3578	Incarnate Word College	10
3938	Inter American, San German	10
1871	Iowa Wesleyan College	10
2990	Jamestown College	5
3637	Jarvis Christian College	6
1100	John Brown University	9
2550	John F. Kennedy College	3
2936	Johnson C. Smith University	9
1023	Judson College	1
1700	Judson College	11
1939	Kansas Newman College	10
1929	Kansas Wesleyan	5

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1969	Kentucky Wesleyan College	10
2744	Keuka College	13
3496	King College	5
2745	Kings College	13
4795	Kirkland College	13
3987	La Roche College	11
1216	La Verne College	8
2747	Ladycliff College	13
3066	Lake Erie College	10
3854	Lakeland College	8
3498	Lambuth College	5
3499	Lane College	13
3501	Le Moyne Owen College	9
3500	Lee College	10
2941	Lenoir Rhyne College	10
3584	Letourneau College	5
3436	Limestone College	10
3502	Lincoln Memth. University	5
6975	Lincoln University	8
3198	Linfield College	12
2942	Livingstone College	9
1276	Lone Mountain College	12
2755	Long Island University	13
1873	Loras College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1220	Los Angeles Baptist College	3
2007	Louisiana College	5
1874	Luther College	10
3293	Lycoming College	10
3720	Lynchburg College	5
2282	Madonna College	10
3072	Malone College	10
3861	Marian Clg. of Fond Du Lac	11
1821	Marian College	10
3073	Marietta College	10
1822	Marion College	10
2765	Marist College	13
2944	Mars Hill College	10
2992	Mary College	9
3588	Mary Hardin Baylor College	5
1876	Marycrest College	10
2284	Marygrove College	12
1932	Marymount College	9
3505	Maryville College	5
2482	Maryville College	10
1722	McKendree College	12
1933	McPherson College	5
1236	Menlo College	13
8419	Mercer University in Atlanta	12

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
2772	Mercy College	1
2286	Mercy College of Detroit	13
3297	Mercyhurst College	12
2945	Meredith College	10
3298	Messiah College	13
2946	Methodist College	10
7032	Mid America Nazarene College	10
9982	Mid South Bible College	3
2553	Midland Lutheran College	10
1028	Miles College	9
3511	Milligan College	10
2414	Millsaps College	5
3865	Milton College	10
2489	Missouri Valley College	10
1029	Mobile College	10
1725	Monmouth College	12
3301	Moravian College	10
1582	Morehouse College	5
1583	Morris Brown College	10
3439	Morris College	9
3818	Morris Harvey College	10
3203	Mount Angel Seminary	1
3465	Mount Marty College	3
3869	Mount Mary College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1880	Mount Mercy College	8
2778	Mount Saint College	13
3405	Mount Saint Joseph College	10
2577	Mount Saint Mary College	13
1243	Mount Saint Mary's College	10
2086	Mount Saint Mary's College	13
3873	Mount Senario College	8
3083	Mount Union College	5
1452	Mount Vernon College	8
1731	Mundelein College	12
3084	Muskingum College	5
2045	Nasson College	13
2298	Nazareth College	6
2951	N. C. Wesleyan College	10
2555	Nebraska Wesleyan University	5
10831	New College of California	3
2579	New England College	13
3440	Newberry College	10
1734	North Central College	12
1735	North Park College	10
3875	Northland College	10
2998	Northwest Bible College	3
3208	Northwest Christian College	11
3783	Northwest College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1624	Northwest Nazarene College	10
1883	Northwestern College	10
2371	Northwestern College	13
7021	Northwood Inst. Ind. Br.	11
3692	Norwich University	5
2497	Notre Dame College	1
2584	Notre Dame College	10
3085	Notre Dame College	11
2790	Nyack College	8
1824	Oakland City College	10
1033	Oakwood College	13
1586	Oglethorpe College	12
3035	Ohio Dominican College	10
3165	Oklahoma Christian College	13
2308	Olivet College	10
1741	Olivet Nazarene College	13
4601	Open Bible College	8
3985	Oral Roberts University	5
1937	Ottawa University	12
3110	Otterbein College	13
3988	Our Lady Angels College	5
2023	Our Lady of Holy Cross	8
1253	Pacific College	13
1255	Pacific Oaks College	8

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1258	Pacific Union College	6
3212	Pacific University	13
1587	Paine College	6
8849	Palm Beach Atlantic College	10
3602	Paul Quinn College	9
1264	Pepperdine University	13
2955	Pfeiffer College	10
1103	Philander Smith College	9
1588	Piedmont College	5
1980	Pikeville College	9
1262	Point Loma College	10
3357	Point Park College	12
3445	Presbyterian College	5
7890	Prescott College	3
2957	Queens College	5
1745	Quincy College	10
3733	Randolph Macon College	5
2048	Ricker College	8
3116	Rio Grande College	8
2586	Rivier College	10
3736	Roanoke College	10
2805	Roberts Wesleyan College	10
9401	Rockmont College	11
2534	Rocky Mountain College	12

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
4917	Roger Williams College	13
2808	Rosary Hill College	13
1180	Russell College	4
2433	Rust College	9
2959	Sacred Heart College	8
1407	Saint Alphonsus College	2
1889	Saint Ambrose College	10
2967	Saint Andrews Presby. College	10
2587	Saint Anselms College	10
2968	Saint Augustines College	12
1043	Saint Bernard College	10
3621	Saint Edwards University	10
3365	Saint Fidelis College	1
1832	Saint Francis College	13
2050	Saint Francis College	13
9640	Saint Francis De Sales	3
2213	Saint Hyacinth College	3
3120	Saint John Clg., Cleveland	12
2821	Saint John Fisher College	10
1834	Saint Joseph Calumet College	12
1833	Saint Joseph College	3
2027	Saint Joseph College	9
1409	Saint Joseph College	11
3685	Saint Joseph The Provider	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
2825	Saint Joseph's College	8
1526	Saint Leo College	10
3794	Saint Martin's College	10
1943	Saint Mary College	11
1835	Saint Mary of the Woods	11
1944	Saint Mary Plains College	10
1302	Saint Mary's Clg. of Cal.	10
2321	Saint Mary's College	6
2508	Saint Mary's College	6
2028	Saint Mary's Dominican Clg.	10
2096	Saint Mary's University	12
1837	Saint Meinrad College	10
1303	Saint Patrick's College	6
3739	Saint Paul's College	9
2343	Saint Scholastica College	12
2832	Saint Thomas Aquinas College	8
1367	Saint Thomas Seminary	6
3368	Saint Vincent College	10
1768	Saint Xavier College	8
3820	Salem College	7
3411	Salve Regina College	3
8860	School for Intl. Training	10
2500	School of the Ozarks	2
1037	Selma University	9

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
2289	Shaw College, Detroit	1
2962	Shaw University	9
1591	Shorter College	5
9192	Sierra Nevada College	1
3850	Silver Lake College	9
1887	Simpson College	5
1291	Simpson College	10
3469	Sioux Falls College	10
11624	Southern Bible College	13
1293	Southern California College	13
3518	Southern Missionary College	1
2502	Southwest Baptist College	10
1940	Southwestern College	5
3619	Southwestern Union College	13
3620	Southwestern University	5
1960	Spalding College	10
1594	Spelman College	5
1663	Spertus College, Judaica	1
2318	Spring Arbor College	10
1041	Spring Hill College	5
2512	Stephens College	13
1945	Sterling College	11
1044	Stillman College	9
2217	Stonehill College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
3795	Sulpician Sem. of Northwest	6
1946	Tabor College	13
2513	Tarkio College	10
1838	Taylor University	13
3524	Tennessee Temple College	13
3525	Tennessee Wesleyan College	10
3638	Texas College	9
3641	Texas Lutheran College	10
3257	The Dropsie University	1
2480	The Lindenwood Colleges	5
3376	Thiel College	10
2001	Thomas More College	12
3121	Tiffin University	10
1595	Tift College	5
1987	Transylvania University	10
3526	Trevecca Nazarene College	8
1771	Trinity Christian College	10
1772	Trinity College	10
3695	Trinity College	13
3527	Tusculum College	5
1988	Union College	5
2563	Union College	10
3528	Union University	12
6858	Unity College	10

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
3651	University of Dallas	5
1891	University of Dubuque	10
3653	University of Plano	2
3654	University of St. Thomas	12
1893	Upper Iowa University	12
2644	Upsala College	12
3134	Ursuline College	10
3387	Villa Maria College	10
3752	Virginia Intermont College	13
5766	Virginia Union University	13
3767	Virginia Wesleyan College	13
3911	Viterbo College	9
3455	Voorhees College	9
2898	Wadhams Hall College	5
3135	Walsh College	10
3225	Warner Pacific College	8
8848	Warner Southern College	11
2979	Warren Wilson College	11
1896	Wartburg College	10
3663	Wayland Baptist College	5
3391	Waynesburg College	10
1600	Wesleyan College	5
2056	Westbrook College	13
1339	Western Baptist Bible College	13

APPENDIX D (CONTINUED)

<u>FICE CODE</u>	<u>NAME OF COLLEGE</u>	<u>CLUSTER NUMBER</u>
1899	Westmar College	10
3392	Westminster College	10
3681	Westminster College	10
2523	Westminster College	12
1341	Westmont College	10
3831	Wheeling College	10
1342	Whittier College	12
3141	Wilberforce University	9
3394	Wilkes College	8
2447	William Carey College	10
2524	William Jewell College	5
1900	William Penn College	10
2525	William Woods College	10
3142	Wilmington College	13
3699	Windham College	13
3457	Wofford College	13
2110	Woodstock College	1
2032	Xavier University of La.	9
3476	Yankton College	10

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A FINANCIAL TAXONOMY OF PRIVATE
LIBERAL ARTS COLLEGES II

by

William Meades Anderson, Jr.

(ABSTRACT)

Recent studies have noted the inadequacy of the Carnegie Commission's classification category of Liberal Arts Colleges II. This study was designed to develop a more definitive taxonomy for the private colleges in this category based on their financial characteristics.

The institutional population for this study consisted of 499 private colleges classified as Liberal Arts Colleges II that were in operation during the fiscal year 1973-74. A computer tape of HEGIS IX data provided by the National Center for Educational Statistics, "Financial Statistics of Institutions of Higher Education 1974," was utilized for the collection of data and computation of specific measures.

Twelve financial variables were selected and each variable was divided by the college's fall 1973-74 FTE student enrollment and the quotient was used as the ratio for this study. This procedure was used to express the financial data in terms of the enrollment of each institution.

The NORMIX cluster analysis was used to analyze these per FTE ratios to determine if sub-classifications of

colleges existed within the total population of 499 colleges. The NORMIX analysis produced 13 clusters of colleges. Each of the 13 clusters was reviewed to determine its financial characteristic and to assess the discriminating importance of the ratios. To facilitate this inspection of the ratios, the mean of each ratio was plotted graphically to explain important deviations from the corresponding ratio for the population of 499 colleges. In addition, characteristic data for each cluster was reviewed.

The discussion of results presented several conclusions, implications, and recommendations for further research. A number of financial strategy considerations were reviewed for the various clusters of colleges. In addition, the enrollment strategy of various colleges was examined.

The cluster analysis technique as used in this study has additional possible uses. First, the system does allow for taxonomy construction based on the variables specified by the researcher. Second, the technique can be used to help edit data. Third, the method could be helpful in determining the mission and academic quality of colleges if additional characteristic data were included in the clustering process.

The technique of financial analysis used in this study suggested topics for further research. The computerized systems available today open new horizons for future researchers.