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THE RELATIONSHIP BETWEEN SELECTED CHARACTERISTICS OF COLLEGE STUDENTS AND THEIR UNIVERSITY DEBTS

By

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ABSTRACT

THE RELATIONSHIP BETWEEN SELECTED CHARACTERISTICS OF COLLEGE STUDENTS AND THEIR UNIVERSITY DEBTS

By

Leonard V. Kogut, Jr.

Students are paying an increasingly larger proportion of the cost of their education, primarily because the State of Michigan appropriations declined as a percentage of the general fund revenues from fiscal 1989 to 1994. With the increased financial burden placed on students, they are experiencing an increased indebtedness to the internal and external loan fund(s) and their accounts receivable.

The focus of the researcher was to look at all freshman students who were enrolled at Ferris State University in Big Rapids, Michigan, during the Fall 1991, 1992, and 1993 terms. The researcher reviewed the relationships of selected student characteristics, including admission, financial aid, academic success, and demographic variables, to determine whether differences existed between nondebtors and debtors with regard to these variables. The entire freshman population for the three years of the study was used. Therefore, statistical sampling was not used to draw any inferences because the full population was used in the study.

The researcher concluded that predictors do exist to identify potential debtors, and the university could use the analysis and results in the admission process. Students' family income was the most significant predictor of a student debtor. The other significant predictors were found to be directly or indirectly tied to family income. These predictors were ethnic origin, ACT composite score, and number of siblings in college. Student's cumulative grade point average was also considered an effective predictor of a debtor. County of residence was considered a less significant predictor. Ideally, these predictors should not preclude or exclude students from admission to the university. Rather, they could be used as a planning mechanism for the student and the university to provide assurances that resources match need. Proactive strategies could be employed to provide assurance that targeted high-risk students can become part of the nondebtor group. The university could consider improving the academic profile and retention of students to ultimately reduce their risk of becoming debtors not only from internal and external loans but balances on their accounts receivable.

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To my children, Leonard V. Kogut III and Thomas E. Kogut, who have given me the light to keep things in perspective. It is my hope they see the same light and it creates for them a strong vision for their future.

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CHAPTER I

INTRODUCTION TO THE STUDY

Introduction

The financing of higher education has changed significantly over the last two decades. Colleges and universities have an ever-changing pool of students and have been forced to change the mix of income sources. In addition, institutions of higher education have expanded into various investment portfolios, which include restaurants, real estate holdings, research facilities, and auxiliary operations (Seymour, 1992).

The two major challenges facing higher education in the 1990s will be tuition-rate increases and the availability of financial aid (Dunn, 1993). Tuition policy and financing continue to top the list of concerns of leaders in higher education (Johnson & Myerson, 1994). The primary concern continues to be tuition increases exceeding a family's ability to pay. During the 10-year period ending June 30, 1993, gross tuition prices more than doubled, rising an average of 8.5% per year. By comparison, the Consumer Price Index for the same period rose an average 3.8% annually (Jacquin & Goyal, 1995). In 1992, tuition rates at public colleges and universities rose at double-digit rates for the second year in a row, increasing at three times the rate of inflation (Evangelauf, 1992).

Tuition rates for 1993 increased less than 6%; however, they outpaced the 2.5% rise in the Consumer Price Index (CPI) over the preceding 12 months (Cage, 1994). Tuition rates for 1994 at public four-year colleges and universities increased 6% over the preceding year. The increase outpaced inflation as measured by the CPI of 2.9%. "The good news is that the rate of increases has continued to lessen," said James B. Appleberry, President of the American Association of State Colleges and Universities. "The bad news is that any increase in tuition limits access, and the impact is differentially hurtful for the economically disadvantaged, minorities, and recent immigrants" (quoted in Evangelauf, 1994, p. A41). At the same time, grant aid has not kept up with rising tuition rates (Knapp, 1992). The reliance on student loans and financial aid packaging shortages are being absorbed by the institution. For many colleges and universities, student receivable balances, especially for undergraduate accounts, are rising, becoming aged, and proving increasingly difficult to collect (Jacquin & Goyal, 1995). As a result, the student bad-debt exposure of colleges and universities is increasing.

Statement of the Problem

Until recently, colleges and universities have been among the few institutions that have not experienced problems with bad debts. The reasons for not experiencing such difficulty in the past are that costs were much lower, grant aid would cover the cost of tuition, and other financial aid would cover the cost of room and board. However, as the funding gap continues to widen, institutions' exposure to debts also should be expected to increase. Further compounding the problem is

the fact that institutions of higher education are under pressure to diversify the mix of students they recruit, to include high-risk students (Hodgkinson, 1986).

At Ferris State University (FSU), the student account receivable balances have been increasing. As these balances have increased, the total debt experience (the amount of money that is not collected for university charges) has also been increasing annually. The university has always had some bad debts, but due to the funding gap the amount has been increasing to the point of becoming a financial problem. To account for the increase, the university records a reserve for bad debts in the audited annual financial statements. The university reserve for debts has been increasing annually as follows: 1991--$236,000, 1992--$352,000, 1993--$320,000, and 1994--$617,000. The slight reduction in 1993 was due to an accounting change when the university charged from quarters to semesters. University management has not thoroughly examined the problem, and such an investigation is timely and necessary.

Background of the Problem

Higher education institutions will be facing many problems in the future. Two of the major problems will be inadequate finances and maintaining student enrollment. In a recent study by the American Council on Education (El-Khawas, 1994), 53% of the respondents to a national survey believed institutions will not have adequate finances, and 30% believed institutions will have difficulty maintaining enrollment. At the same time, 87% of public institutions indicated an increased reliance on tuition revenues to balance the budget. Also, 87% of the respondents

indicated that increasing amounts of institutional funds are being diverted for student financial aid.

Congress is considering major changes to the federal student-aid programs. If the changes are approved, the result could be the largest increase in the cost of college in the nation's history. Students depend heavily on student aid. The federal government will make available approximately $33 billion for low-income and middle-income students during the 1994/95 academic year. About one-half of all students receive some form of federal student aid. Any changes in the federal student loan program may drive away many low-income students, minorities, and those who are culturally averse to debt (Hartle, 1995).

FSU has experienced financial problems and an enrollment decline. The financial problems have been addressed with a fiscal restructuring plan. The original restructuring proposal was dated September 30, 1993. The fiscal restructuring proposal called for a reduction of $7.9 million ($5.9 million base salary plus $2 million benefits) to the base budget. The proposal was driven by projections of future budget problems caused by declining enrollment, limited state appropriations, salary adjustments to base over previous years, and retirement cost estimates (Sederburg, 1994).

FSU expected continued budget difficulty based on expected enrollment on-campus for Fall 1995 of 8,640, down from 9,182 for the Fall 1994 semester. The expectation of conservative politics in Lansing will not change; therefore, no major

changes are expected in state appropriations. The current market will not tolerate tuition increases much beyond an inflationary increase.

Accordingly, the statistical profile of the 1994/95 freshman class showed 29% of the respondents indicated low tuition as a very important reason for selecting a college (American Council on Education, 1995). In the same study, 29.6% of the respondents said they chose a college based on the amount of financial aid offered. Only 29.9% of the students indicated they had no concern about the financing of their college costs.

State of Michigan Public Act 7 of 1995 created an income tax credit for college tuition and uniformly applied fees paid on behalf of a student or the taxpayer beginning in tax year 1995. To claim the credit, a taxpayer must be a resident of Michigan, have a household income of no more than $200,000, and the student must attend a Michigan higher education institution that claims tuition will not increase in the ensuing academic year more than the preceding year's rate of inflation. This act will force the Michigan higher education community to limit tuition increases, but it will not guarantee adjustments in state appropriations to the rate of inflation or make changes in funding formulas. The Board of Trustees at FSU voted to approve a tuition rate increase of 3.5% for the 1996 academic year. The rate of increase, which is above the United States Department of Labor CPI, will not allow FSU students to receive a tax credit for tuition paid.

State of Michigan appropriations are not keeping up with the CPI. The State of Michigan is also requiring institutions to pick up costs of retirement benefits, which, in the past, were paid by the state.

During the past five years, costs have been increasing, family income of FSU students has been decreasing, grant funding has remained the same, loan dollars have been increasing, institutional aid has only been keeping pace with tuition increases, state appropriations have not been keeping up with inflation, and enrollment has been declining. All of these factors have an effect on the university's debt picture. As costs increase, fewer students will be able to afford a higher education. This situation is of particular concern to a residential campus such as FSU because the majority of students do not come from a commuting distance. Not only will tuition revenues be affected, but auxiliary funds will be experiencing difficult times.

The reduction of family income will make it more difficult for students to receive additional resources necessary to pay for all costs of higher education. Grant funding has remained the same and is not expected to increase. Students must increase their loan debt to cover educational costs. Students are now leaving the institution not only with loan debt primarily from the federal Stafford loan program sources, but also with a balance due on their university student account receivable. This student account receivable balance was reviewed by the researcher.

As students begin to default on their federal loans, the calculated default rates need to be monitored. If the default rates increase above the federal mandates,

future participation could be reduced or eliminated. FSU has not experienced high default rates but is aware of the implications of increasing default rates.

Purpose of the Study

The researcher's primary purpose in this study was to compare freshman students identified as debtors with the nondebtors of the FSU student body to determine whether any differences existed between the two groups in terms of admission, financial aid, academic success, and student demographic variables. Students considered in the study were freshmen who owed the university more than $150 or more at the end of the Fall 1991, 1992, and 1993 terms. The student debtors were those students whose account receivable balance continued to equal $150 or more at the end of the following term. If the student account receivable balance was reduced below $150, the student was not considered a debtor for purposes of this study. The researcher believed that if the debt was not paid during the following term, the student debt had a high probability of becoming a bad debt and future write-off of the student account receivable.

The researcher investigated the relationship of selected student-borrower characteristics to the propensity to become a debtor. Those characteristics were analyzed using the full population to determine whether any differences existed in the characteristics of the debtor when compared to the nondebtor. The differences were used to predict future debtors from nondebtors based on the characteristics studied.

Importance of the Study

FSU has not addressed the problem of student debts, primarily because of the limited number of debtors historically and the relatively low dollar amounts involved. However, an increasing need has arisen for universities to address the problem of increasing student account receivable debts, due primarily to increasing charges for costs of university attendance. However, as costs have been increasing, grant funding and family income have not increased to fill the gap. The gap is then being absorbed by students assuming larger loan debts or leaving the university with an account receivable balance due, and in many cases, both.

The researcher found a limited amount written on the issue of debts for institutions of higher education. However, debts are a part of doing business for these institutions, as they are for most other businesses. Management needs to understand the student account receivable debt relationship that is evolving.

The study was limited to the freshman class because they are the largest class. Freshmen are also at greatest risk of becoming debtors due to dollar limits placed on borrowing funds and a delay in disbursing federal loan funds.

Students who successfully complete their freshman year increase their chances of completing their course of study and are eligible for additional loan dollars for future years. In an effort to collect student accounts more effectively, FSU established a policy of not releasing transcripts to students who have an outstanding account receivable balance. This policy has proven to be very successful in

collecting student account receivable balances, particularly long term, when students need a transcript for career placement or to attend another college.

Another policy the university follows is not allowing students to register for a future term if they have an account receivable balance of more than $150. This was the reason for selecting $150 as a cutoff to identify debtors from nondebtors. This policy has had the effect of limiting the write-off to one term of charges. This amount was increased by 50% beginning in the Fall 1993 term, when the university changed from quarters to semesters.

The results of the study will be useful to university management in determining whether any findings can predict a debtor in contrast to a nondebtor. The results also should enable FSU management to understand the risk levels associated with particular student characteristics, and perhaps to approach the account receivable debt expense as financial aid rather than debt per se. Higher education costs cannot become so expensive that students will be forced to assume more debt to pay their educational expenses. Because grant dollars are not keeping pace with rising costs, loan value is increasing significantly. With the Federal Direct Stafford Loan Program, repayments may be made over 30 years. This could be a lifetime of payments for a student's college education. Administrators must look for alternatives to increasing the grant aid available to keep student debt to a minimum. The student account receivable debt is not dischargeable under the federal bankruptcy code, leaving some students no bankruptcy relief unless financial hardship can be established.

Because of increasing costs of college and university operations, the continuing erosion of student financial aid from public and private sources, and the expanding competition for students, a marketplace has been created in which need-conscious practices may have to be considered, according to the National Association of College Admission Counselors (1994). Although in violation of principles, schools must seize one of the few opportunities to be able to ensure that a portion of their student body is paying for all costs, based on the students' ability to pay, rather than academic or personal criteria.

The National Association of College Admission Counselors (NACAC) issued The 1979 Statement of Principles of Good Practice in College Admissions and Recruitment. The principles were developed by the NACAC collaboratively with the American Association of Collegiate Registrars and Admissions Officers (AACRAO), the College Board, and the National Association of Secondary School Principals (NASSP). The statement has been endorsed by the American Council on Education (ACE). The current Statement of Principles of Good Practice contains the following sections:

> II.A.6 [College and University Members agree that they will:] Admit candidates on the basis of academic and personal criteria rather than financial need. This provision shall not apply to foreign nationals ineligible for federal student assistance.
>
> IV.A.9 [College and University Members agree that they will:] Not use financial need as a consideration in selecting students. This provision shall not apply to foreign nationals ineligible for federal student assistance. (NACAC, 1994, p. 2)

Due to the changes expressed in the student characteristics and funding patterns, a study of student debt must be conducted. In this study the researcher sought to determine whether the admission, financial aid, academic success, or demographic variables can be used as predictors of students who may become debtors.

Research Questions

The following research questions were posed to guide the collection of data for this study:

1. Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following admission variables: (a) application date and (b) college in which they are enrolled?

2. Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following financial aid variables: (a) financial aid need, (b) financial aid awarded, (c) income, (d) cumulative loan debt, (e) financial aid application date, and (f) number of siblings in college?

3. Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following academic-success variables: (a) grade point average and (b) ACT composite test score?

4. Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following demographic variables: (a) ethnic origin, (b) county of residence, (c) age, (d) gender, (e) marital status, and (f) state residency status?

Delimitations and Limitations

Delimitations

This study was delimited in the following ways:

1. To include in the study population only those freshman students who were enrolled at FSU during the Fall 1991, 1992, and 1993 terms.

2. To examine total debts as they appear in the student accounts receivable files at FSU.

3. To consider the financial aid debts accumulated by the students as they appear in the student information files at FSU.

4. To examine the admission, financial aid, academic success, and demographic variables.

Limitations

The study was conducted in an educational environment, which imposed the following restrictions:

1. Scarcity of institutional research on this topic.

2. Literature on student debt limited to debt as it relates to the financial aid loan programs.

Definition of Terms

The following terms are defined in the context in which they are used in this study:

Account receivable refers to the balance the student owes the university after all payments have been applied to his or her account.

Cost of attendance includes tuition, fees, room and board, books and supplies, and a personal allowance for living expenses.

Debtor refers to a student who owes a university account receivable of $150 or more at the end of the term. The letter "D" is used in the study to identify a debtor.

Debts refer to money owed to the university for all charges not paid at the end of the term. The student financial aid loan balances are considered separate from student account receivable balances.

Diversity of students includes ethnicity, age, and economic characteristics.

Downsizing refers to the reduction of the size of an organization.

Financial aid is the full award the student receives. The award could include grants, loans, and employment. Funds for the awards come from federal, state, institutional, and private sources.

Freshman is a student who has accumulated fewer than 30 semester or 45 quarter hours of credit.

Full payers are students who receive no scholarship or grant aid.

Full-time students are those who are enrolled for 12 or more credit hours per term.

Funding gap is the difference between cost of attendance and the sum of financial aid, student contribution, and family contribution. The amount will be the financial shortfall the student will experience between cost and available resources.

Gapping occurs when an admitted student is awarded a financial aid package that meets less than his or her full demonstrated need.

Heavy borrowers are students who are financing their education with a high reliance on student financial aid loans.

Management refers to the administrators of the university who follow the board policies.

Need-blind admission uses only academic and personal criteria in admission practices.

Need-conscious admissions are those that apply, or hold open the option of applying, candidates' financial need as a consideration in the admission of any portion of the applicant pool.

Nondebtor is a student whose account with the university is less than $150. The letters "ND" identify nondebtors in the study.

Part-time students are those enrolled for fewer than 12 credit hours per quarter or semester.

Quarter is a session that is 10 weeks long. FSU was on the quarter system before Fall 1993.

Retrenching is the changing of the organizational structure of an entity, which involves reducing the size of the organization to enhance efficiency.

Semester is a session that is 15 weeks long. FSU has been on the semester system since Fall 1993.

Sources of funding include financial aid awards, family contributions, and the student's personal resources. The student's personal resources are derived from savings and earned income.

Term is used to mean either a quarter or a semester system because the study includes both systems.

Organization of the Dissertation

Chapter I contained an introduction to the study, a statement of the problem, background of the problem, purpose of the study, importance of the research, the research questions posed in the study, delimitations and limitations of the research, and definitions of key terms.

Literature relevant to the study is reviewed in Chapter II. Topics that are discussed include the funding of higher education, financial aid, enrollment, external support of higher education, and state funding.

Chapter III contains an explanation of the methodology that was used in carrying out the study. The study population is described, techniques that were used in collecting the data are discussed, the research questions and hypotheses are stated, and the data-analysis techniques that were employed in testing the hypotheses are explained.

The results of the data analyses are presented in Chapter IV. Chapter V contains a summary of the study, conclusions drawn from the study findings, recommendations for practice, implications for future research, and reflections.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter contains a review of the literature related to this study. The writer's purpose in this study was to determine whether freshman students who owed university account receivable debts had any identifiable characteristics when compared to nondebtors. The review of literature indicated that limited writings were available that were directly related to students and their university debt. Literature was available on the debts as they related to student financial aid; however, that was not a focus of the study.

The researcher reviewed the literature on topics including the funding of higher education, financial aid, enrollment, external support of higher education, and state funding issues. In reviewing the literature on these topics, the focus was on why the debt is increasing. The reasons are that the funding of higher education is being reduced, financial aid grant money is limited and loans are increasing, enrollment is decreasing, external support is becoming more important, and state funding is not increasing. It is for these reasons, either individually or collectively, that higher education institutions are experiencing an increase in student debt. The

problems facing higher education that will lead to an increased risk of university debts are also considered in this chapter.

The Funding of Higher Education

In the 1990s, colleges and universities have been experiencing much uncertainty with regard to the future. Whereas expansion has been the buzzword in higher education for the past 50 years, the current buzzwords are cost containment and retrenching. However, with changes in the national economy, increasing tuition rates, and a shrinking pool of 18 to 22 year olds, contraction is now the order of the day. Both public and private colleges are retrenching in order to stay afloat. Cutbacks are causing alarm within the college community and frustration among students, who believe that the schools will be unable to provide what the marketing brochures and admissions counselors promised (Ostling, 1992).

The reality of higher education is that it is a business. It provides a service and must locate customers who are willing to purchase the service. The locating of customers may take the admission process regionally, nationally, and/or internationally. With declining enrollments, colleges need customers to fill their classrooms. All of the customers qualify for some federal financial aid, which keeps colleges afloat. Meanwhile, the financial aid officers do their best to get money from the student and the student's family. The difference in the cost and family contribution is the student's need. It is the student need that is met with financial aid, including, in many cases, a large percentage with student loans (Chany, 1994).

According to chief business officers, the major issues that will influence higher education in the 1990s are market related. These include tuition pricing, availability and types of financial aid programs, and local and regional demographics (Forbes, 1990). Tuition policy and financing continue to head the list of concerns of higher education leaders (Johnson, 1994).

Many academic leaders perceive that the major challenge for institutions will include trade-offs between students' access to higher education and academic quality. One or both of these items are likely to suffer because neither state appropriations nor tuition rates will increase enough to finance them both, at least at previous levels (Jacobson, 1991). In the 1992-93 academic year, tuition at public colleges and universities rose at double-digit rates, increasing three times the rate of inflation. This followed a double-digit increase for the 1991-92 academic year, the first increase of this magnitude since the 1983-84 academic year (Evangelauf, 1992).

During the ten-year period ending June 30, 1993, tuition prices more than doubled. The average annual rate was about 8.5%, compared to the CPI of 3.8%. Another factor contributing to student debt is the complexity of the financial aid process (Jacquin, 1995).

For colleges and universities to raise tuition and fees at a rate faster than family incomes are growing is self-defeating. When tuition and fees are increased, colleges are forced to divert into financial aid some of the revenue they might

otherwise spend on programs, and the number of students who can afford to attend college is reduced (Dunn, 1993).

Financial Aid in Higher Education

The importance to a college or university of being able to offer students a good financial aid package cannot be underestimated. Because recruiting is the lifeblood of the institution, a plan for using financial aid to create an optimal mix of students is necessary for achieving the institution's overall recruitment goals. A problem is that most constituencies of higher education institutions have different views of financial aid. Students see it as a reduction of expenses, faculty see it as a method of recruiting better students, and admissions officers see it as a way to achieve enrollment goals (Hoke, 1993).

The four major trends in the financing of higher education are of concern to universities. First, the amount of student borrowing has exploded in the last five years. During the 1990 fiscal year, students and parents borrowed $12.3 billion. That amount increased to $23.9 billion in fiscal 1994. Second, colleges are spending a larger portion of their resources on student aid. The institutional dollars are used to attract students the college wishes to enroll. The institutional dollars grew from $4 billion in fiscal 1989 to $8 billion in fiscal 1994. Third, congress is proposing the sharp reduction of federal financial aid. The House Budget Committee has proposed eliminating in-school interest subsidies on the federal loan programs and eliminating all campus-based aid programs. The changes would reduce student aid by about $20 billion over five years. Fourth, cuts in federal student aid will affect

the students and the campus. Universities would be forced to make up the cuts from other sources or be prepared to lower enrollments (Hartle, 1995).

These trends have been making and will continue to make it difficult for students to afford a higher education. Universities need to define a financing model they will need to follow to be successful and adapt to the changing market conditions.

The relationship between the need-blind admissions philosophy and the institutions' financial aid policies are in conflict. The financial aid dollars available at most universities are not adequate to fully meet the needs of all students admitted. When institutions claim to be need-blind, they typically ignore the financial need of the students they admit. Because universities cannot provide all the financial aid needed for the students they admit, a financial shortfall is created for the students and the university. The ways of meeting need have varied across and within universities. One university may offer a loan in the student's financial aid package that is significantly different from that of another student. These differences in packaging have a different effect on two students. The difficulty is that the weakest students, those with the least chance of completing their studies, end up with the most loans and work in their award package. Some universities calculate the student's ability to pay using different rules. The lack of financial aid funding creates a situation that forces students to borrow money and work to attend the university (McPherson, 1993).

In a study by the American Council of Education, 70% of the 1991 respondents indicated loans were essential for their enrollment in college. In that study it was also found that the student loan debt increased by 50% between 1985 and 1991 and that the average loan repayment as a percentage of income increased from 5.4% to 6.3% for undergraduates (Boyd, 1993).

Even with colleges' and universities' limited resources, financial aid will receive a share of the institutional budget. But what proportion of the budget should be allocated to financial aid? Many colleges are having difficulty determining what the proportion should be. With the reduction in federal grant dollars, schools have raised institutional levels of support and increased the use of loan money to fill gaps in the grant program. Institutional costs have increased due to increases in salaries and institutional financial aid funding. To compensate for these increases in expenditures, tuition has been increased along with aid levels, and the proportion of students receiving financial aid also has increased. Fewer students are "full payers," and many of the students who are full payers are heavy borrowers (Dickmeyer, 1993).

If the United States is to remain a world economic and political leader, management of educational institutions must look to the changing population from which the leaders of tomorrow will emerge. More than 30% of the population are from minority groups or are recent immigrants to the United States; they must not be relegated to second-class citizenship. Campbell and Campbell (1990) believed that

the federal government should increase financial aid to allow all citizens the opportunity to receive higher education.

Enrollment in Higher Education

America's higher education system is experiencing a cultural revolution. According to Hughes (1991), the next ten years will see:

1. a continued reduction in the traditional 18- to 24-year-old population attending college.
2. the increased participation of women, ethnic and racial minorities, and foreign students in education.
3. the increased participation of individuals over age 35, including retirees, in education.
4. continued, striking shifts in state and regional populations.

Coincidental with these demographic shifts is America's transition from an industrial to an information/service-based economy. This transition has resulted in:

1. an increased demand for workers to attain higher levels of education.
2. major dislocations of the workforce due to "downsizing," "rightsizing," and emergence of a flat network of organizations.
3. increased mobility of the workforce and multiple career changes.
4. fierce international competition for market share and productivity gains.
5. advances in technology and communication, and a change in the concepts of work and education.

Higher education institutions are coming under increased scrutiny to help create a workforce that will make the nation's economy more competitive internationally (Hughes, 1991).

According to Clark Kerr (cited in Hughes, 1991), President emeritus of the University of California, "The push by national economic and political leaders for higher education to make a greater contribution to U.S. industrial competitiveness will also intensify, leading to more and better skills training and more and better research, particularly in applied areas" (p. 14). The workforce and demographic trends are causing a paradigm shift in higher education, from a historic identity as a provider of discrete learning experiences for young people, to a new identity as a provider of lifelong education to adults who are engaged in the workplace. Attendance at higher education institutions is changing from full time to part time; such attendance often is intermittent, continuing throughout most of one's life (Hughes, 1991).

Maintaining student enrollments has become a vital concern for most institutions of higher education because budgets now depend on enrollments (Hossler, 1985). Demographic trends before the end of the twentieth century will force higher education institutions to change how enrollment is maintained in light of these changes. Some of the changes facing these institutions are as follows: Students' standardized test scores will be declining, diverse types of learners will be looking beyond community colleges for education, students' ability to pay will increasingly decline, the cost of a college degree will rise faster than that of any

comparable service, and differences in the preparedness of incoming freshmen will be significant (Hodgkinson, 1986).

Each year, the decline in the number of high school graduates has been one of the most frequently discussed topics in the field of higher education. The decrease has made administrators nervous because of lost revenue and jobs. The same administrators were looking ahead to 1994, the year in which the high school decline was expected to reverse itself. However, this change will not make it easier to recruit students; in fact, through the end of the decade and beyond, the higher education marketplace will become even more competitive. The national picture will experience a change in demographics. Proportions of ethnic and racial minorities will change, as will the geographic distribution of the high-school-age population (Seiver, 1992).

When pursuing academically talented high school students, college recruiters should be aware that these students are more sophisticated about financial issues in choosing a college than are many students of lower academic ability (Tierney, 1983). This factor, too, will influence enrollment in institutions of higher education.

A small number of institutions can afford need-blind admissions. In a survey conducted by the National Association of College Admission Counselors (1994), 9% of the respondents indicated they were not 100% need-blind before May 1. However, the number increased to 14% following May 1. The significance is that some schools were following a need-conscious admission practice, which was against their own accepted principles.

External Support of Higher Education

External support has become an important source of funding for colleges and universities. Gifts to schools, colleges, and other educational entities increased 4%, to about $2.43 billion from 1990 to 1991, according to a report entitled "Corporate Support of Education, 1991" (Blumenstyk, 1992). Gifts of money are the most welcomed by college development officers. Cash is what colleges and universities need most, and when gifts are of an unusual nature, institution personnel must decide whether to sell the gift, find a creative use for it, or reject it outright and risk offending the donor (Lieb, 1992).

Public institutions have started to solicit gifts from community members and alumni and to conduct large capital campaigns because states cannot provide enough money to fuel the growth that colleges have deemed necessary. In general, public colleges and universities have been successful in terms of private fundraising. However, many public college officials worry that the state legislators may decide that institutions attracting large gifts do not need as much state money as in the past (Nicklin, 1992).

Corporations are looking for a return from the colleges and universities to which they make donations. At times, restrictions are placed on the gifts. This burgeoning privatization or reliance on nonstate funds is creating haves and have-nots among the nation's universities. The haves are the areas of campus in the best position to receive support from businesses or alumni. Another problem with many gifts has been that the expenditures are designated, not by administrators but by the

outside sponsor or donor (Yudof, 1992). Conversely, benefits of cooperation are necessary between higher education and industry. With the transition from a technology-oriented economy to an information/service economy, such cooperation is very important (Powers, 1988).

Many college and university fund-raisers understand that women represent a virtually untapped donor market. Fund-raisers are now paying much closer attention to the views of alumnae concerning their alma maters (McMillen, 1992).

Many institutions resent the mega-campaigns for donor support waged by prestigious institutions. However, in many instances, these multi-million-dollar capital campaigns have been very successful in raising money (Gearhart, 1991).

State Funding of Higher Education

Budget cuts have stripped colleges and universities of needed funds. The recession is partly to blame for this situation. The states, whose own tax revenues have declined, are unable to make up for the federal cutbacks. In academic year 1991-92, for the first time in the 33 years of the Chambers survey, state support for higher education declined. Thirteen states, including seven of the largest, reported declines over the preceding two years. In many states, faculties and course offerings have been cut. Everywhere, tuition has jumped while salaries have remained constant (Clayton, 1992).

More state resources are now being shifted to build prisons, provide health care, and finance other endeavors, leaving less money for colleges and universities. As a result, these institutions have had to increase tuition in order to balance their

budgets without mass firings and program cuts. A college or university must realize that it cannot maintain low tuition while receiving low state support and still maintain a quality program (Mercer, 1993).

State legislators have been discussing proposals to abandon the traditional model of low public college tuition maintained by state appropriations in favor of so-called "high tuition/high financial aid" plans. The theory is that state legislatures can cut support to higher education and colleges and universities need to raise tuition; revenue from higher tuition would be used to provide more aid to students who are unable to pay the increased costs. However, not enough affluent students are available to support the large number of low-income students (Lopez, 1993).

State of Michigan Public Act 7 of 1995 creates an income tax credit for college tuition and uniformly applied fees paid on behalf of a student or a taxpayer beginning in tax year 1995. This act will force the Michigan higher education community to limit tuition increases. Michigan State University announced in January 1995 that tuition increases over the next four years would be held to the rate of inflation, but only if the state appropriations rise by at least the same rate. Although state officials have hailed Michigan State University's promise to limit costs, some legislators said they were reluctant to make a similar guarantee. The board of trustees at FSU voted to approve a tuition-rate increase of 3.5% for the 1995/96 academic year. That rate of increase is above the United States Department of Labor CPI. Due to the size of the increase, FSU students will not receive a tax credit for the tuition they paid for the 1995/96 academic year. This type

of situation does not work to FSU's advantage when a student is shopping for a state-funded university to attend.

CHAPTER III

METHODOLOGY

Introduction

The researcher's primary purpose in this study was to compare students identified as debtors with the nondebtors of the FSU student body to determine whether any differences existed between the two groups in terms of admission, financial aid, academic success, and demographic variables. Students considered to be debtors were those who were enrolled in the Fall 1991, 1992, and 1993 terms. The population studied included only freshman students. The freshman students were divided into two groups. One group included students who had a student account receivable of $150 or more, and the other group included students who owed nothing or less than $150. The researcher chose $150 because FSU uses this dollar amount to stop students from registering for future terms. Therefore, this is the maximum amount of debt a student could owe the university and continue enrollment.

Once the debtor was identified, the debtor's record was reviewed at the end of the Winter term to determine whether the student owed $150 or more. If the debtor had reduced the debt below $150, he or she was considered a nondebtor. This step was necessary because students may pay their balances before Winter

term classes begin, and they would not be candidates to become debtors. The study was conducted to determine whether recent debtors from FSU had certain characteristics that could be considered by FSU management to identify future student characteristics that increase the potential for becoming debtors. The identification of variables that might be related to bad debts is considered a descriptive study (McMillan & Schumacher, 1989). Because the study contained all freshman students from the respective Fall terms under investigation, no inferential statistics were used.

The Study Population

The study population consisted of all freshman students who were enrolled in credit-producing classes during the Fall 1991, 1992, and 1993 terms. The population was divided into two groups: (a) those freshman students who continued to owe the university $150 or more at the end of the term following Fall were called debtors, and (b) the balance of the FSU freshman student body were referred to as nondebtors. Selection of a sample was not necessary because all freshman students who were enrolled for their respective Fall term were included in the study.

Data Collection

Data were extracted from the FSU Student Information System database, using the university's mainframe computer, and down-loaded to a microcomputer file. A debtor file was generated, using a data-query program. Every freshman student who was enrolled during the Fall 1991, 1992, and 1993 terms was in either

the nondebtor or debtor group. The researcher did not contact students in any way to collect additional information because all of the information required for the study was included in the FSU database. All variables studied had some missing data; however, no variable had more than 5% missing data. The missing data were, in all cases, caused by the field not having data or the observed variable having some irrelevant information for analysis.

Research Questions and Hypotheses

The following research questions were posed to guide the collection of data for this study:

Research Question 1: Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following admission variables: (a) application date and (b) college in which they are enrolled?

Research Question 2: Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following financial aid variables: (a) financial aid need, (b) financial aid awarded, (c) income, (d) cumulative loan debt, (e) financial aid application date, and (f) number of siblings in college?

Research Question 3: Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following academic-success variables: (a) grade point average and (b) ACT composite test score?

Research Question 4: Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following demographic variables: (a)

ethnic origin, (b) county of residence, (c) age, (d) gender, (e) marital status, and (f) state residency status?

The null hypotheses that were formulated to answer each research question are as follows:

Hypothesis 1: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following admission variables: (a) application date and (b) college in which they are enrolled.

Hypothesis 1a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to application date.

Hypothesis 1b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to college in which they are enrolled.

Hypothesis 2: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following financial aid variables: (a) financial aid need, (b) financial aid awarded, (c) family income, (d) cumulative loan amount, (e) financial aid application date, and (f) number of siblings in college.

Hypothesis 2a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid need.

Hypothesis 2b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid awarded.

Hypothesis 2c: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to family income.

Hypothesis 2d: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to cumulative loan debt.

Hypothesis 2e: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid application date.

Hypothesis 2f: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to number of siblings in college.

Hypothesis 3: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following academic-success variables: (a) grade point average and (b) ACT composite test score.

Hypothesis 3a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to grade point average.

Hypothesis 3b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to ACT composite test score.

Hypothesis 4: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following demographic variables: (a) ethnic origin, (b) county of residence, (c) age, (d) gender, (e) marital status, and (f) state residency status.

Hypothesis 4a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to ethnic origin.

Hypothesis 4b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to county of residence.

Hypothesis 4c: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to age.

Hypothesis 4d: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to gender.

Hypothesis 4e: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to marital status.

Hypothesis 4f: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to state residency status.

Data Processing and Analysis

The data for each hypothesis were analyzed using the Statistical Package for the Social Sciences (SPSS) statistical program. Two methods, chi-square and t-test, were used in analyzing the data. According to McMillan and Schumacher (1989), the chi-square statistic is used "when the data are in nominal form. The test is a

means of answering questions about association or relationship based on frequencies of observations in categories" (p. 369). The authors said that the t-test is used to compare two means and "to determine the probability level (p level) of rejecting the null hypothesis" (p. 355). The methods that were employed in testing specific hypotheses are as follows:

Hypothesis 1a (application date):	chi-square
Hypothesis 1b (college in which enrolled)	chi-square
Hypothesis 2a (financial aid need):	t-test
Hypothesis 2b (financial aid awarded):	t-test
Hypothesis 2c (family income):	t-test
Hypothesis 2d (cumulative loan debt):	t-test
Hypothesis 2e (financial aid application date):	t-test
Hypothesis 2f (number of siblings in college):	t-test
Hypothesis 3a (grade point average):	t-test
Hypothesis 3b (ACT composite score):	t-test
Hypothesis 4a (ethnic origin)	chi-square
Hypothesis 4b (county of residence):	chi-square
Hypothesis 4c (age):	t-test
Hypothesis 4d (gender):	chi-square
Hypothesis 4e (marital status):	chi-square
Hypothesis 4f (state residency status):	chi-square

Results of the data analyses are reported in Chapter IV.

CHAPTER IV

RESULTS OF THE DATA ANALYSIS

Introduction

The researcher's purpose in this study was to investigate the relationship of selected student characteristics to the propensity to become a debtor. Those characteristics were analyzed using the full freshman population at FSU to determine whether any differences existed in the characteristics of the nondebtor when compared to the debtor.

The student characteristics were studied over a three-year period for the Fall 1991, 1992, and 1993 terms. Because the full freshman population was used in the study, no inferences were made about what the selected characteristics may reveal for the population based on a sample. However, statistical techniques were used to analyze the data, and those techniques were used to answer the research questions.

Freshman Debt Summary

The FSU freshman population declined over the three years of the study. The number of freshman student debtors, by year, is shown in Table 1. The number of freshman students who were considered debtors increased at a time when the total number of freshman students declined. The average debt increased over the three years of the study.

Table 1: Summary of freshman debt figures by term.

Term	Average Debt	Maximum Debt	Number of Students		Total Debt
			ND	D	
Fall 1991	$ 639	$2,413	4,610	144	$ 92,003
Fall 1992	$ 767	$3,371	4,271	210	$161,039
Fall 1993	$1,201	$4,314	3,984	307	$368,582

Cost of Attendance

During the same three-year period, costs increased at a rate faster than the CPI. The cumulative increase for tuition and housing from Fall 1991 to Fall 1993 was 29.15%, compared to 11.7% for the CPI. A comparison of the costs, broken down by tuition and housing, for a six-year period is shown in Table 2. The trend has been for costs to increase higher than the CPI by more than a 2 to 1 ratio. These increases should reflect a higher debt to FSU, particularly when the family income of the average freshman has not kept pace with inflation.

Table 2: Cost of attendance and the CPI.

	Fiscal Year Ending June 30					
	1989	1990	1991	1992	1993	1994
Tuition[a]	$2,223	$2,397	$2,565	$2,970	$3,222	$3,412
% increase	27.1	7.83	7.01	15.8	8.48	5.90
Housing–20 meal[a]	$2,781	$3,018	$3,318	$3,707	$3,923	$4,171
% increase	17.9	8.52	9.94	11.7	5.83	6.32
Total costs[a]	$5,004	$5,415	$5,883	$6,677	$7,145	$7,583
% increase	21.8	8.21	8.64	13.5	7.01	6.13
CPI	123.5	129.4	136.4	140.8	145.2	148.8
CPI % change/yr	4.7	4.8	5.4	3.2	3.1	2.5

[a]For the academic year.

Average Family Income

The average family income for the freshman students is summarized in Table 3. The average family income in the table came from the annual ACT freshman profile. The family income from 1989 to 1994 experienced a negative trend and actually declined in current dollars. Family income declined when adjusted for inflation as measured by the CPI. The decrease between 1989 and 1994, as adjusted for the CPI, resulted in a loss of purchasing power of $6,846 for the average FSU family. The increasing costs could not be absorbed by family resources if the purchasing power of the family was experiencing such a reduction, and at the same time, costs were increasing at a rate exceeding the CPI. The family income used in the balance of the study will come from the university student information system. The student information system figures do not come from the ACT profile but from the student financial aid applications. The results will show a lower average family income.

Table 3: Average freshman's family income, and adjusted for the CPI.

	Year					
	1989	1990	1991	1992	1993	1994
Family income (ACT)	$37,830	$38,117	$36,521	$36,642	$37,282	$37,080
Family income adjusted for CPI	$37,830	$39,938	$40,336	$41,775	$43,833	$44,676

Findings Relative to the Research Questions

Research Question 1

Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following admission variables: (a) application date and (b) college in which they are enrolled?

Hypothesis 1a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to application date.

Hypothesis 1b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to college in which they are enrolled.

Application date. The application date was the only variable analyzed for which data were not available for the freshman population for the three years under investigation. The analysis was completed for the Fall 1993 term, but no analysis was conducted for 1991 and 1992 because data were unavailable for those years. FSU converted to an automated Student Information System in August 1993, and the previous years' data were not converted. The researcher reviewed the hard copy and determined that files were not available to conduct the research, either manually or using a statistical sample.

The dates students applied to FSU are summarized in Table 4. The earliest application date was September 1992, and the latest application date was September 1993. From the table it can be determined that students who applied from September 1992 to December 1992 were less likely to become debtors. The cumulative difference in December showed that 21.6% of the debtors had made application by the end of December, compared to 39% of the nondebtors. For students who had not applied by April 1993, the difference became less significant,

Table 4: Application dates, by month, for nondebtors and debtors for Fall term 1993.

Application Date	Total $ Debt	Average Debt by Month	Debtors			Nondebtors		
			No.	%	Cum. %	No.	%	Cum %
Sept. 1992	$15,928	$1,225	13	4.3	4.3	369	10.7	10.7
Oct. 1992	$13,190	$1,466	9	2.9	7.2	278	8.1	18.8
Nov. 1992	$18,248	$1,217	15	4.9	12.1	354	10.3	29.1
Dec. 1992	$32,034	$1,105	29	9.5	21.6	341	9.9	39.0
Jan. 1993	$49,218	$1,330	37	12.1	33.8	326	9.5	48.4
Feb. 1993	$48,335	$1,510	32	10.5	44.3	277	8.0	56.5
March 1993	$34,613	$ 935	37	12.1	56.4	323	9.4	65.9
April 1993	$32,267	$1,195	27	8.9	65.2	165	4.8	70.7
May 1993	$16,302	$1,254	13	4.3	69.5	122	3.5	74.2
June 1993	$47,978	$ 979	49	16.1	85.6	386	11.2	85.4
July 1993	$39,929	$1,377	29	9.5	95.1	255	7.4	92.8
Aug. 1993	$16,700	$1,193	14	4.6	99.7	247	7.2	100.0
Sept. 1993	$ 436	$ 436	1	0.3	100.0	0	0.0	100.0
TOTAL	$365,178	$1,197	305	100.0		3,443	100.0	

and in June, the two groups were not different. Approximately one-third of the Fall 1993 freshman class applied after April. This delay in applying makes planning difficult for both the student and the university. Therefore, application date is not a factor in determining debtors from nondebtors.

College where enrolled. Table 5 contains a summary of nondebtors and debtors by the college in which students were enrolled at the start of each of the respective Fall terms. The College of Arts and Sciences had the highest proportion of debtors to the school population of all seven colleges. The College of Arts and Sciences has students who are given the opportunity to enter introductory programs. After the students are successful in the introductory programs, they are allowed to move into a designated major. Because of the FSU policy of admitting students and giving them an opportunity, it was expected that the College of Arts and Sciences would be the highest debtor college.

The Colleges of Allied Health Sciences, Optometry, and Pharmacy have higher admissions criteria and do not typically have freshman students in their programs. Therefore, they are not as susceptible to experiencing a high proportion of the students being debtors. Hence, college in which the student is enrolled is not a factor in determining debtors from nondebtors.

Table 5: Colleges in which nondebtors and debtors were enrolled.

College		1991			1992			1993			3-Year Average		
		ND	D	Total	ND	D	Total	ND	D	Total	ND	D	Total
A/S	n	1,031	75	1,106	1,087	101	1,188	1,072	157	1,229	1,063	111	1,174
	Row %	93.2	6.8	100.0	91.5	8.5	100.0	87.2	12.8	100.0	90.6	9.4	100.0
	Col %	23.2	47.5	24.1	26.9	45.7	27.9	29.4	47.6	30.9	26.5	46.9	27.6
AHS	n	500	7	507	513	11	524	362	25	387	458	14	473
	Row %	98.6	1.4	100.0	97.9	2.1	100.0	93.5	6.5	100.0	96.7	3.3	100.0
	Col %	11.3	4.4	11.0	12.7	5.0	12.3	9.9	7.6	9.7	11.3	5.7	11.0
BUS	n	354	50	1,404	1,054	50	1,104	733	64	797	1,047	55	1,102
	Row %	96.4	3.6	100.0	95.5	4.5	100.0	92.0	8.0	100.0	94.6	5.4	100.0
	Col %	30.5	31.6	30.5	26.1	22.6	25.9	20.1	19.4	20.1	25.6	24.5	25.5
EDU	n	653	9	662	577	32	609	530	44	574	587	28	615
	Row %	98.6	1.4	100.0	94.7	5.3	100.0	92.3	7.7	100.0	95.2	4.8	100.0
	Col %	14.7	5.7	14.4	14.3	14.5	14.3	14.5	13.3	14.4	14.5	11.2	14.4
OPT	n	42	0	42	34	1	35	17	0	17	31	0	31
	Row %	100.0	0.0	100.0	97.1	2.9	100.0	100.0	0.0	100.0	99.0	1.0	100.0
	Col %	0.9	0.0	0.9	0.8	0.5	0.8	0.5	0.0	0.4	0.7	0.2	0.7
PHR	n	17	0	17	13	0	13	44	1	45	25	0	25
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	97.8	2.2	100.0	99.3	0.7	100.0
	Col %	0.4	0.0	0.4	0.3	0.0	0.3	1.2	0.3	1.1	0.6	0.1	0.6

Table 5: Continued.

		1991			1992			1993			3-Year Average		
TEC	n	843	17	860	762	26	788	887	39	926	831	27	858
	Row %	98.0	2.0	100.0	96.7	3.3	100.0	95.8	4.2	100.0	96.8	3.2	100.0
	Col %	19.0	10.8	18.7	18.9	11.8	18.5	24.3	11.8	23.3	20.7	11.5	20.2
TOTAL	n	4,440	158	4,598	4,040	221	4,261	3,645	330	3,975	4,042	236	4,278
	Row %	96.6	3.4	100.0	94.8	5.2	100.0	91.7	8.3	100.0	94.4	5.6	100.0
	Col %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Key: ND = nondebtors, D = debtors
A/S = Arts and Sciences, AHS = Allied Health Sciences, BUS = Business, EDU = Education, OPT = Optometry, PHR = Pharmacy, TEC = Technology

Research Question 2

Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following financial aid variables: (a) financial aid need, (b) financial aid awarded, (c) income, (d) cumulative loan debt, (e) financial aid application date, and (f) number of siblings in college?

Hypothesis 2a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid need.

Hypothesis 2b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid awarded.

Hypothesis 2c: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to family income.

Hypothesis 2d: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to cumulative loan debt.

Hypothesis 2e: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid application date.

Hypothesis 2f: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to number of siblings in college.

Financial aid need. The financial aid need of debtors and nondebtors is included in Table 6. The debtors had a higher financial aid need when compared with the nondebtors. The average financial aid need for the three years not only increased annually, the gap of financial aid need also increased annually, but the gap of financial aid need between nondebtors and debtors also grew. The average difference between nondebtors and debtors in 1991 was $270. The following two years it increased, by $1,107 in 1992 and $1,537 in 1993. The nondebtors were less needy than the debtors. If the trend continues, the financial aid need will increase. As the financial aid need continues to increase and the supply of grant dollars does

not increase, the university should expect an increase in the annual amount of debt. Based on the three years of this study, the trend is negative for the university if the financial aid need continues to increase for students. Hence, financial aid need is a factor in determining debtors from nondebtors.

Table 6: Financial aid need by nondebtors and debtors.

Term	Number of Students	Financial Aid Need	Difference
Fall 1991 Nondebtors	2,486	$3,961	
Fall 1991 Debtors	122	$4,231	$ 270
Fall 1992 Nondebtors	2,377	$4,973	
Fall 1992 Debtors	164	$6,080	$1,107
Fall 1993 Nondebtors	2,389	$5,687	
Fall 1993 Debtors	262	$7,224	$1,537

Financial aid trend. Total financial aid has increased annually. The increases for the six years from 1989 to 1994 were in the form of loans, primarily from federal sources. The Pell Grant maximum awards for the same six years are summarized in Table 7. No increase in the funding of the federal Pell Grant occurred, and at the same time, costs increased significantly. The percentage of loans to financial aid dollars increased from 38% to 56% in the six years studied. In 1989, tuition (Table 2) for the academic year was $2,223 and the maximum Pell Grant was $2,300 (Table 7). This was the last academic year the Pell Grant would pay for all of the student's tuition. In 1994, tuition was $3,412 (Table 2) and the maximum Pell Grant

was $2,300, for a difference of $1,112. This reduction of grant funding and the increased reliance on debt will cause many students to leave higher education with a significant debt burden. The amount of debt a student could accumulate will be significant. The Stafford loan program in 1994 made up 91.74% of the loan volume of $23,680,000. Fortunately, the program exists in order for students to secure some of the funds necessary to pay for their college expenses.

Table 7: FSU financial aid trends from 1989 to 1994.

	Year					
	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
Max. Pell Grant	$ 2,300	$ 2,300	$ 2,400	$ 2,300	$ 2,300	$ 2,300
Total aid (000)	$21,023	$21,482	$27,204	$32,574	$40,361	$42,630
% change	N/A	2.18	26.63	19.74	23.90	5.62
Federal aid (000)	$14,927	$15,903	$20,157	$24,099	$31,546	$33,378
State aid (000)	$ 1,386	$ 1,723	$ 2,059	$ 3,483	$ 3,479	$ 3,186
Inst. aid (000)	$ 4,260	$ 3,493	$ 4,536	$ 4,547	$ 4,994	$ 4,482
Private aid (000)	$ 450	$ 363	$ 452	$ 455	$ 342	$ 1,565
Loans (000)	$ 8,075	$ 8,964	$11,894	$15,119	$23,764	$23,680
% loans/FA	38.41	41.73	43.72	46.41	58.88	55.55
Stafford loans (000)	$ 5,632	$ 6,228	$ 9,311	$12,716	$21,577	$21,724
% Stafford/loans	69.75	69.47	78.29	84.11	90.80	91.74

The increase in debt may have future ramifications to universities if the default rate is above a federally mandated amount. Currently, FSU has not experienced a default rate that would impair future funding of its federal financial aid programs.

Financial aid awarded. As shown in Table 6, the debtors were more needy than the nondebtors. In Table 8, it can be seen that the actual aid awarded was higher for the nondebtors than the debtors. The researcher determined that the reason for higher awards was the larger loan volume assumed earlier in the awarding process by the nondebtors. The amount awarded did increase annually for both the nondebtors and the debtors; however, the difference was reduced from $1,019 in 1991 to $464 in 1993. This reduction was due, in part, to larger loan awards given sooner in the awarding process. Therefore, financial aid awarded is not a factor in determining debtors from nondebtors.

Table 8: Financial aid awarded to nondebtors and debtors.

Term	Number of Students	Ave. Financial Award	Difference
Fall 1991 Nondebtors	2,483	$3,722	
Fall 1991 Debtors	122	$2,703	$1,019
Fall 1992 Nondebtors	2,377	$4,479	
Fall 1992 Debtors	164	$3,364	$1,115
Fall 1993 Nondebtors	2,389	$5,108	
Fall 1993 Debtors	262	$4,644	$ 464

Family income. The next question to answer was whether any difference existed in the family incomes of the nondebtors and the debtors. The average family incomes of the nondebtors and debtors are summarized in Table 9. The researcher determined that the nondebtors had a family income of $9,979 more than the

debtors in 1991. Although the difference was less in 1992 and 1993, it averaged $8,437. The difference in family incomes of nondebtors and debtors was significant enough to determine that family income is an indicator of future debtors. The average family income in Table 3 was higher because the figures came from the ACT freshman profile, which tabulates the family income of all families. The values in Table 9 were from the FSU Student Information System and reflect figures for only those students who applied for financial aid. Therefore, family income is a factor in determining debtors from nondebtors.

Table 9: Family income of nondebtors and debtors.

Term	Number of Students	Average Family Income	Difference
Fall 1991 Nondebtors	2,808	$26,772	
Fall 1991 Debtors	126	$16,792	$9,980
Fall 1992 Nondebtors	2,599	$25,630	
Fall 1992 Debtors	174	$17,121	$8,509
Fall 1993 Nondebtors	2,489	$28,057	
Fall 1993 Debtors	267	$19,691	$8,366

Cumulative loan. As shown in Table 10, the cumulative loan for nondebtors remained relatively constant, as compared with the debtors. The debtors accumulated a larger loan debt as compared to the nondebtors. During the three years of the study, the average loan of the debtors increased to $2,029. The maximum loan a freshman can accumulate in the Federal Stafford Loan Program is

$2,625. If this trend continues, FSU will not be in a position to increase the debt burden to cover the increased costs. Therefore, cumulative loan amount is not a factor in determining debtors from nondebtors.

Table 10: Cumulative loans of nondebtors and debtors.

Term	Number of Students	Cumulative Loan	Difference
Fall 1991 Nondebtors	4,465	$2,026	
Fall 1991 Debtors	144	$1,235	$791
Fall 1992 Nondebtors	4,061	$2,088	
Fall 1992 Debtors	210	$1,155	$933
Fall 1993 Nondebtors	3,676	$1,922	
Fall 1993 Debtors	307	$2,029	($107)

Financial aid application date. The researcher reviewed the financial aid application dates to determine whether a difference existed between the nondebtors and the debtors. The date used for this analysis was the date the student had completed his or her financial aid file. The student may have applied sooner, but until all required documentation is available in the Financial Aid Office, the student will not receive a financial aid award. The data on the financial aid application date were then converted to a percentage of the applications and summarized using a cumulative total by month.

The results of the review of financial aid application dates are shown in Table 11. The cumulative financial aid application dates show that students who applied for aid sooner were less likely to become debtors than were students who applied

later. This was not as good an indicator for students who applied after May. The important realization is that the cut-off date for financial aid applications to be considered for the maximum financial aid is April 1. After that date, there is no guarantee that resources will be available for all students applying for financial aid. Once school was in session in September, the debtors and nondebtors applied for financial aid at about the same rate. Also important is the fact that 90% of the freshman class applying for financial aid did so through August. Therefore, financial aid application date is not a factor in determining debtors from nondebtors.

Table 11: Financial aid applications for nondebtors and debtors (cumulative %).

	1991		1992		1993	
	Debtors	Nondebtors	Debtors	Nondebtors	Debtors	Nondebtors
Jan.	0.0	1.0	1.3	1.5	1.3	0.5
Feb.	6.5	14.1	13.4	27.8	18.6	26.5
March	18.5	43.9	32.9	54.3	40.7	54.7
April	49.1	65.6	53.0	70.3	57.6	70.9
May	53.7	77.4	62.4	79.1	68.9	78.9
June	70.4	82.5	73.1	85.1	79.7	84.6
July	80.6	87.7	79.8	90.5	84.9	89.5
Aug.	87.1	91.3	85.8	94.6	90.5	93.4
Sept.	89.9	94.7	94.6	97.0	94.4	96.3
Oct.	97.3	96.5	96.7	98.1	96.1	97.7
Nov.	100.0	97.7	98.0	98.7	97.4	98.6
Dec.	100.0	98.4	98.0	99.1	98.7	99.2
	1992		1993		1994	
Jan.	100.0	99.0	98.0	99.3	100.0	99.7
Feb.	100.0	99.5	98.0	99.5	100.0	100.0
March	100.0	99.8	99.3	100.0	100.0	100.0
April	100.0	100.0	100.0	100.0	100.0	100.0

Number of siblings in college. Nondebtors and debtors also were compared with regard to the number of siblings in college over the three-year range of the study (see Table 12). The highest frequency of debtors were from families with one other sibling in school. Having two or more siblings in college decreased the chances of students becoming debtors. The proportion of debtors to the freshman population remained constant among those with more than one sibling in college. It also was found that students who had no other siblings in college were the least likely to become debtors. Therefore, number of siblings in college is a factor in determining debtors from nondebtors.

Research Question 3

> Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following academic-success variables: (a) grade point average and (b) ACT composite test score?
>
> Hypothesis 3a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to grade point average.
>
> Hypothesis 3b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to ACT composite test score.

Grade point average. The grade point averages were summarized by ranges from lowest to highest. FSU is on a 4-point grading scale. The grade point averages of nondebtors and debtors are summarized in Table 13. The students with lower grade point averages had a higher proportion of debt than did students who had higher grade point averages. During the Fall 1991 term, 45% of the freshmen had grade point averages over 2.5. However, this same group had only 7.7% of the debtors. This contrasted with the students with grade points below 1.5, who

Table 12: Number of siblings of nondebtors and debtors who were in college.

No. of Siblings		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
0	n	2,289	43	2,332	2,074	62	2,136	1,778	86	1,864
	Row %	98.2	1.8	100.0	97.1	2.9	100.0	95.4	4.6	100.0
	Col %	51.3	29.3	50.6	51.1	29.5	50.0	48.4	28.0	46.8
1	n	1,421	75	1,496	1,298	106	1,404	1,244	153	1,397
	Row %	95.0	5.0	100.0	92.5	7.5	100.0	89.0	11.0	100.0
	Col %	31.8	52.1	32.5	32.0	50.5	32.9	33.8	49.8	35.1
2	n	607	22	629	572	31	603	532	55	587
	Row %	96.5	3.5	100.0	94.9	5.1	100.0	90.6	9.4	100.0
	Col %	13.6	15.3	13.6	14.1	14.8	14.1	14.5	17.9	14.7
3	n	132	4	136	106	9	115	107	9	116
	Row %	97.1	2.9	100.0	92.2	7.8	100.0	92.2	7.8	100.0
	Col %	3.0	2.8	3.0	2.6	4.3	2.7	2.9	2.9	2.9
4	n	15	0	15	9	2	11	14	4	18
	Row %	100.0	0.0	100.0	81.8	18.2	100.0	77.8	22.2	100.0
	Col %	0.3	0.0	0.3	0.2	1.0	0.3	0.4	1.3	0.5
5	n	1	0	1	1	0	1	1	0	1
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	n	4,465	144	4,609	4,060	210	4,270	3,676	307	3,983
	Row %	96.9	3.1	100.0	95.1	4.9	100.0	92.3	7.7	100.0

Table 13: Grade point averages of nondebtors and debtors.

GPA		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
0-0.49	n	123	22	145	145	25	170	226	55	281
	Row %	84.8	15.2	100.0	85.3	14.7	100.0	80.4	19.6	100.0
	Col %	2.8	15.3	3.2	3.6	11.9	4.0	6.2	17.9	7.1
.5-1.49	n	386	42	428	379	71	450	447	99	546
	Row %	90.2	9.8	100.0	84.2	15.8	100.0	81.9	18.1	100.0
	Col %	8.7	29.2	9.3	9.4	33.8	10.6	12.2	32.2	13.7
1.5-2.49	n	1,886	69	1,955	1,677	89	1,766	1,344	129	1,473
	Row %	96.5	3.5	100.0	95.0	5.0	100.0	91.2	8.8	100.0
	Col %	42.4	47.9	42.5	41.5	42.4	41.5	36.6	42.0	37.0
2.5-3.49	n	1,697	9	1,706	1,480	23	1,503	1,287	20	1,307
	Row %	99.5	0.5	100.0	98.5	1.5	100.0	98.5	1.5	100.0
	Col %	38.1	6.3	37.1	36.6	11.0	35.5	35.1	6.5	32.9
3.5-4.0	n	359	2	361	364	2	366	366	4	370
	Row %	99.4	0.6	100.0	99.5	0.5	100.0	98.9	1.1	100.0
	Col %	8.1	1.4	7.9	9.0	1.0	8.6	10.0	1.3	9.3
Total	n	4,451	144	4,595	4,045	210	4,255	3,670	307	3,977
	Row %	96.9	3.1	100.0	95.1	4.9	100.0	92.3	7.7	100.0

accounted for 12.5% of the freshman population but comprised 44.5% of the debtor population. The group with grade points from 1.5 to 2.5 accounted for 42.5% of the freshman population and 47.9% of the debtors.

The results were similar for 1992 and 1993. During Fall terms 1992 and 1993, the students with grade points over 2.5 comprised 43.9% and 42.9% of the freshman population, respectively. However, the same group had only 12% and 7.8% of the debtors, respectively. This contrasted with the students with grade points below 1.5, who accounted for 14.6% and 20.8% of the freshman population, but accounted for 45.7% and 50.1% of the debtor population, respectively.

The trend for the freshman grade point below the 1.5 level has grown annually. If that trend continues, poor performance as measured by the grade point average could be used as a predictor of a student becoming a debtor. The grade point used in this study was the cumulative grade point average at FSU at the end of the Fall 1991, 1992, and 1993 terms. The grade point average is not available before a student completes a term of study. Therefore, grade point average is a factor in determining debtors from nondebtors once the grade point average is established.

ACT composite test score. The ACT composite test scores were examined to determine whether any difference existed between nondebtors and debtors on this measure. The ACT scores were taken from the results received by entering freshmen from the American College Testing Program. At FSU, the results of the ACT test are used for academic placement purposes only. The ACT composite test

scores within ranges are summarized in Table 14. An ACT score of "none" results from the fact that not all students are required to submit test scores for admission. Examples of students who are included in the "none" category are part-time, off-campus, graduate, transfer, and nontraditional students. The "none" category has increased annually because enrollment of the groups defined above has been increasing.

In the three years of the study, the ACT composite test scores of 16 or less had a higher proportion of debtors to the freshman population than did scores of 17 or greater. The ACT composite test score was consistent over the ranges specified in Table 14 when compared from year to year. The students in the higher ACT composite test score ranges had a lower incident of debt as compared to students who had a lower ACT composite test score, who had a higher incidence of debt. Therefore, ACT composite test score is a factor in determining debtors from nondebtors.

Research Question 4

> Do freshman debtors differ from the balance of the FSU freshman student body with regard to the following demographic variables: (a) ethnic origin, (b) county of residence, (c) age, (d) gender, (e) marital status, and (f) state residency status?
>
> Hypothesis 4a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to ethnic origin.
>
> Hypothesis 4b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to county of residence.
>
> Hypothesis 4c: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to age.

Table 14: ACT composite scores of nondebtors and debtors.

Score		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
None	n	736	9	745	752	35	787	875	39	914
	Row %	98.8	1.2	100.0	95.6	4.4	100.0	95.7	4.3	100.0
	Col %	16.5	6.3	16.2	18.5	16.7	18.4	23.8	12.7	22.9
1-10	n	13	1	14	11	2	13	6	4	10
	Row %	92.7	7.1	100.0	84.6	15.4	100.0	60.0	40.0	100.0
	Col %	0.3	0.7	0.3	0.3	1.0	0.3	0.2	1.3	0.3
11-13	n	248	27	275	245	37	282	180	41	221
	Row %	90.2	9.8	100.0	86.9	13.1	100.0	81.5	18.6	100.0
	Col %	18.8	18.8	6.0	6.0	17.6	6.6	4.9	13.4	5.6
14-16	n	1,018	45	1,063	887	61	948	744	111	855
	Row %	95.8	4.2	100.0	93.6	6.4	100.0	87.0	13.0	100.0
	Col %	22.8	31.1	23.1	21.8	29.0	22.2	20.2	36.2	21.5
17-19	n	1,367	35	1,402	1,166	46	1,212	963	71	1,034
	Row %	97.5	2.5	100.0	96.2	3.8	100.0	93.1	6.9	100.0
	Col %	30.6	24.3	30.4	28.7	21.9	28.4	26.2	23.1	26.0
20-22	n	726	21	747	632	20	652	553	28	581
	Row %	97.2	2.8	100.0	96.9	3.1	100.0	95.2	4.8	100.0
	Col %	16.3	14.6	16.2	15.6	9.5	15.3	15.0	9.1	14.6
23-25	n	258	4	262	258	8	266	245	7	252
	Row %	98.5	1.5	100.0	97.0	3.0	100.0	97.2	2.8	100.0
	Col %	5.8	2.8	5.7	6.4	3.8	6.2	6.7	2.3	6.3

Table 14: Continued.

Score		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
26+	n Row % Col %	99 98.0 2.2	2 2.0 1.4	101 100.0 2.2	110 99.1 2.7	1 0.9 0.5	111 100.0 2.6	110 94.8 3.0	6 5.2 2.0	116 100.0 2.9
Total	n Row %	4,465 96.9	144 3.1	4,609 100.0	4,061 95.1	210 4.9	4,271 100.0	3,676 92.3	307 7.7	3,983 100.0

Hypothesis 4d: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to gender.

Hypothesis 4e: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to marital status.

Hypothesis 4f: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to state residency status.

Ethnic origin. The ethnic origin of nondebtors and debtors for the Fall 1991, 1992, and 1993 terms is shown in Table 15. Ethnic origin was broken down into five categories: white, black, Hispanic, Native American, and Asian. The white category was the major ethnic category at FSU, accounting for more than 80% of the freshman student body. When the white students and black students in this study were added together, they collectively accounted for about 96% of the freshman student body. The results of the study indicated that the black ethnic group had the highest proportion of debt to the freshman population. In 1991, the black ethnic category accounted for 12.8% of the freshman population, but it accounted for 45.8% of the debtors. In 1992 and 1993, respectively, the black category accounted for 16.4% and 15.4% of the freshman population and 57% and 57.7% of the debtors. Ethnic origin, therefore, can be used as a predictor of a debtor.

County of residence. In reviewing the county of residence, all residents of Michigan were studied to determine whether any differences existed between nondebtors and debtors. A summary of the findings may be found in Appendix A. It was found that Wayne County did, in fact, show a significant difference in the debtor to freshman population percentage of the county. Wayne County had a ratio of 11.5% of the freshman population and 28.7% of the debtors for 1991. The

Table 15: Ethnic origin of nondebtors and debtors.

Ethnic Origin		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
White	n	3,743	68	3,811	3,277	83	3,360	2,972	113	3,085
	Row %	98.2	1.8	100.0	97.5	2.5	100.0	96.3	3.7	100.0
	Col %	85.7	47.2	84.4	82.9	41.5	80.9	84.0	37.9	80.5
Black	n	510	66	576	555	114	669	419	172	591
	Row %	88.5	11.5	100.0	83.0	17.0	100.0	70.9	29.1	100.0
	Col %	11.7	45.8	12.8	14.0	57.0	16.4	11.8	57.7	15.4
Hispanic	n	50	3	53	45	2	47	57	2	59
	Row %	94.3	5.7	100.0	95.7	4.3	100.0	96.6	3.4	100.0
	Col %	1.1	2.1	1.2	1.1	1.1	1.1	1.6	0.7	1.5
Native Amer.	n	35	7	42	46	1	47	42	10	52
	Row %	83.3	16.7	100.0	97.9	2.1	100.0	80.8	19.2	100.0
	Col %	0.8	4.9	0.9	1.2	0.5	1.1	1.2	3.4	1.4
Asian	n	32	0	32	30	0	30	46	1	47
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	97.9	2.1	100.0
	Col %	0.7	0.0	0.7	0.8	0.0	0.7	1.3	0.3	1.2
Total	n	4,370	144	4,514	3,953	200	4,153	3,536	298	3,834
	Row %	96.8	3.2	100.0	95.2	4.8	100.0	92.2	7.8	100.0

percentages for 1992 and 1993, respectively, were 14.2% and 13.9% of the freshman population and 39.3% and 40.9% of the debtors.

In reviewing the FSU data for the 83 counties, it was found that five counties accounted for about 44% of the freshman population. The counties were Genesee, Kent, Mecosta, Oakland, and Wayne. FSU is located in Mecosta County. The ratios for each county had a percentage of debtors to percentage of freshman population that was close to being proportionally equal. The FSU student population mirrored the state population, with at least one student from each county and the majority of the freshman class coming from the larger urban areas. Only Wayne County could be used in determining debtors from nondebtors.

Age. The ages of the nondebtors and debtors were examined to determine whether a difference existed in the two groups (see Table 16). In the three years of the study, the average age of debtors was about 1.5 years less than the age of nondebtors. As FSU recruits more part-time students, the average age is increasing. This trend can be seen in Table 16, which shows the average age of students is rising. The results show that, annually, older students have a lower probability of becoming debtors than do those who are younger. This could be because the older student is more serious, better understands the financial commitment, attends college on a part-time basis, is employed, and/or may be married. Therefore, age is not a factor in determining debtors from nondebtors.

Table 16: Average ages of nondebtors and debtors.

Term	Number of Students	Average Age
Fall 1991 Nondebtors	4,430	21.76
Fall 1991 Debtors	144	20.19
Fall 1992 Nondebtors	4,035	21.96
Fall 1992 Debtors	208	20.32
Fall 1993 Nondebtors	3,648	22.43
Fall 1993 Debtors	304	20.78

Gender. The researcher looked at the gender of the freshman class for the Fall 1991, 1992, and 1993 terms to determine whether gender made a difference when comparing nondebtors and debtors (see Table 17). Gender could not be used to determine a difference between nondebtors and debtors. In the three years studied, the proportions of nondebtors and debtors were almost equal when viewed by gender. Therefore, gender is not a factor in determining debtors from nondebtors.

Marital status. The marital status of the FSU freshman student body is shown in Table 18. The results showed that married students were less likely to become debtors than were single students. Single students made up the majority of the freshman class, with 92.3%, 92.1%, and 94.4% of the freshman student body for the Fall 1991, 1992, and 1993 terms, respectively. Therefore, marital status is not a factor in determining debtors from nondebtors.

Residency status. The researcher reviewed the residency status of the freshman student body. Differences in residency between nondebtors and debtors

Table 17: Gender of nondebtors and debtors.

Gender		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
Male	n	2,570	84	2,654	2,319	120	2,439	2,265	181	2,446
	Row %	96.8	3.2	100.0	95.1	4.9	100.0	92.6	7.4	100.0
	Col %	57.7	58.3	57.7	57.2	57.4	57.2	61.7	59.2	61.2
Female	n	1,884	60	1,944	1,733	89	1,822	1,404	125	1,529
	Row %	96.9	3.1	100.0	95.1	4.9	100.0	91.8	8.2	100.0
	Col %	42.3	41.7	42.3	42.8	42.6	42.8	38.3	40.8	38.5
Total	n	4,454	144	4,598	4,052	209	4,261	3,669	306	3,975
	Row %	96.9	3.1	100.0	95.1	4.9	100.0	92.3	7.7	100.0

Table 18: Marital status of nondebtors and debtors.

Marital Status		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
Single	n	4,102	140	4,242	3,720	204	3,924	3,231	294	3,525
	Row %	96.7	3.3	100.0	94.8	5.2	100.0	91.7	8.3	100.0
	Col %	92.1	97.2	92.3	91.8	97.6	92.1	93.9	99.7	94.4
Married	n	350	4	354	331	5	336	209	1	210
	Row %	98.9	1.1	100.0	98.5	1.5	100.0	99.5	0.5	100.0
	Col %	7.9	2.8	7.7	8.2	2.4	7.9	6.1	0.3	5.6
Total	n	4,452	144	4,596	4,051	209	4,260	3,440	295	3,735
	Row %	96.9	3.1	100.0	95.1	4.9	100.0	92.1	7.9	100.0

are shown in Table 19. The researcher did not review the nonresidents to determine where the students resided. The nonresident population included any students who did not claim Michigan as their residence state. The nonresidents could be foreign students or those from any state other than Michigan. The nonresident students averaged about 5% of the freshman class and accounted for a smaller proportion of the debt. Since nonresidents were not a significant proportion of the freshman population, it was difficult to determine what risk should be assigned to the residency category. What could be determined was that foreign students were at a reduced risk of becoming debtors, as compared to Michigan residents.

Summary of Findings Relative to the Research Questions

In summarizing the findings of the investigation of Research Question 1, the following were observed:

> Hypothesis 1: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following admission variables: (as) application date and (b) college in which they are enrolled.
>
> Hypothesis 1a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to application date.

The hypothesis was rejected for students from Fall 1993, when reviewing the cumulative percentages of application dates for nondebtors and debtors. The application dates for Fall 1993 were shown in Table 4. The students who applied from September to December 1992 had a smaller proportion of debtors than nondebtors. The greatest difference occurred in December, with cumulative applicants of 21.6% of debtors and 39% of the nondebtors. The data supported the

Table 19: Residency status of nondebtors and debtors.

Res. Status		1991			1992			1993		
		ND	D	Total	ND	D	Total	ND	D	Total
Resident	n	4,256	143	4,399	3,830	201	4,031	3,456	298	3,754
	Row %	96.7	3.3	100.0	95.0	5.0	100.0	92.1	7.9	100.0
	Col %	95.6	99.3	95.7	94.5	96.2	94.6	94.2	97.4	94.4
Nonres.	n	198	1	199	222	8	230	213	8	221
	Row %	99.5	0.5	100.0	96.5	3.5	100.0	96.4	3.6	100.0
	Col %	4.4	0.7	4.3	5.5	3.8	5.4	5.8	2.6	5.6
Total	n	4,454	144	4,598	4,052	209	4,261	3,669	306	3,975
	Row %	96.9	3.1	100.0	95.1	4.9	100.0	92.3	7.7	100.0

notion that earlier applicants are less likely to become debtors. For students who had not applied by April 1993, the difference was about equal, and the hypothesis was not rejected for students who applied late. Approximately one-third of the students applied after April.

> Hypothesis 1b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to college in which they are enrolled.

The hypothesis was rejected when looking at the College of Arts and Sciences. The hypothesis was not rejected for the other six colleges at FSU. The data for all colleges, as well as the reasons why the College of Arts and Sciences would reject the null hypothesis, were summarized in Table 5. The most apparent reason is that many students are admitted to the university before being accepted into a designated major.

In summarizing the findings of the investigation of Research Question 2, the following were observed:

> Hypothesis 2: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following financial aid variables: (a) financial aid need, (b) financial aid awarded, (c) family income, (d) cumulative loan amount, (e) financial aid application date, and (f) number of siblings in college.

> Hypothesis 2a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid need.

Hypothesis 2a was rejected because a difference did exist between the financial aid need for debtors and nondebtors. The data were summarized in Table 6. Although the difference in financial aid need was $270 higher for debtors in 1991, it grew to a difference of $1,537 in 1993. The financial aid need of nondebtors in the

1991 to 1993 period grew by $1,726--to $5,687. For the same period, the financial aid need of debtors grew by $2,993--to $7,224. Therefore, a student with a higher financial need is more likely to become a debtor.

Hypothesis 2b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid awarded.

Hypothesis 2b was rejected because debtors had less financial aid awarded than did nondebtors. The financial aid awarded was summarized in Table 8. The results indicate that many needy students do not accept loans but do accept grants. Once these students are on campus and begin receiving their invoices, they realize the need for additional resources and apply for loans at that time.

Hypothesis 2c: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to family income.

Hypothesis 2c was rejected. Debtors did differ from nondebtors in terms of family income. As seen in Table 9, the trend was a reduction in the difference between nondebtors and debtors. Nondebtors' family income was $9,980, $8,509, and $8,366 less than that of debtors in 1991, 1992, and 1993, respectively.

Hypothesis 2d: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to cumulative loan debt.

Hypothesis 2d was rejected. From the data in Table 10, it is apparent that a difference did exist between nondebtors and debtors. However, the difference declined from $791 to ($107), or a difference of $898 when comparing 1991 and 1993, respectively. The small difference in 1993 points to the fact that more students were accepting loan awards earlier in their education than in previous years. Debtors had cumulative debt of $1,235 in 1991, $1,155 in 1992, and $2,028

in 1993. Freshmen are allowed to borrow only $2,625 in Stafford Loan funds for the academic year. As students approach the maximum loan amount, covering increased costs with debt becomes more and more difficult. This is critical to the more needy students. At the time when the student borrows the maximum loan, the university will see the student account receivable becoming uncollectable.

> Hypothesis 2e: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to financial aid application date.

Hypothesis 2e was rejected. Nondebtors were more likely to apply for financial aid earlier than debtors, as shown in Table 11. More than 90% of freshmen applied for financial aid by the beginning of the respective fall term. The trend over the three years showed that debtors were applying earlier for financial aid. This is the result of a proactive effort by the financial aid office to communicate better with the freshmen and to monitor students' financial aid process. Students who apply by the April 1 priority date have the opportunity to receive a better financial aid package than those who apply later. If the trend continues, the hypothesis could be retained.

> Hypothesis 2f: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to number of siblings in college.

This hypothesis was rejected. The number of siblings did make a difference in the amount of debt (see Table 12). Students who came to FSU with no other siblings in college made up about half of the freshman class but comprised about 28% of the class debtors. Freshmen with one other sibling in college had the highest probability of becoming debtors. The one-sibling group comprised about

one-third of the population for the three years under study and accounted for one-half of the debtors.

In summarizing the findings of the investigation of Research Question 3, the following were observed:

> Hypothesis 3: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following academic-success variables: (a) grade point average and (b) ACT composite test score.

> Hypothesis 3a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to grade point average.

This hypothesis was rejected. As shown in Table 13, the lower the students' grade point average, the higher the probability of their being debtors. Students with a grade point average between 0 and 1.5 constituted an increasingly larger portion of the population and, likewise, brought an increasing debt burden upon themselves and the university. The reverse was true for students with a 2.5 or higher grade point average. These students accounted for about 45% of the freshman population but comprised only 10% of the debtors. Thus, a student's performance in the classroom can be used as a predictor of that student becoming a debtor.

> Hypothesis 3b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to ACT composite test score.

This hypothesis was rejected. ACT composite scores of the nondebtors and debtors were summarized in Table 14. Students with an ACT composite score of 16 or less had a significantly higher chance of being a debtor than did those with an ACT composite score of 17 or higher. Thus, the ACT composite score can be used to predict a debtor. However, an increasing number of freshmen are not required

to provide an ACT score for admission purposes. The academic counselors use the ACT score as a placement tool.

In summarizing the findings of the investigation of Research Question 4, the following were observed:

> Hypothesis 4: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to the following demographic variables: (a) ethnic origin, (b) county of residence, (c) age, (d) gender, (e) marital status, and (f) state residency status.
>
> Hypothesis 4a: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to ethnic origin.

This hypothesis was rejected. The majority of the FSU freshman population were either white or black. In the three years of the study, as shown in Table 15, the two groups combined made up about 96% of the freshman class. Whites accounted for about 80% of the freshman population and about 42% of the debtors. Blacks accounted for about 15% of the freshman population and about 52% of the debtors. The three other ethnic categories were Hispanic, Native American, and Asian. Asian students were the least likely to become debtors. Hispanic and Native American students jointly numbered fewer than 100 students and had a proportion of debtors that was about the same as their share of the population.

> Hypothesis 4b: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to county of residence.

The hypothesis was not rejected for all counties except Wayne County. The remaining 81 counties did not have a trend that could be used to predict a debtor in comparison to a nondebtor (see Appendix A). The largest number of FSU freshmen came from Mecosta and Wayne counties; students from these two counties,

combined, constituted about 25% of the freshman class. Wayne County is the Michigan county with the largest population, and Mecosta County is the home of FSU. Although Mecosta County has a population of only 50,000, FSU provides a community college mission for Mecosta and for the surrounding four-county area, which accounts for the number of students attending from that vicinity.

Hypothesis 4c: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to age.

This hypothesis was rejected. The ages of debtors and nondebtors were shown in Table 16. The average age of the debtors was about 1.6 years less than that of the nondebtors. Also, the mean age of the students increased annually, reflecting the increase in the number of adult learners in the freshman population.

Hypothesis 4d: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to gender.

This hypothesis was not rejected. As shown in Table 17, no significant differences were found between nondebtors and debtors in terms of gender in any of the three years under study.

Hypothesis 4e: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to marital status.

This hypothesis was rejected. Marital-status data were reported in Table 18. Married students were less likely to become debtors as compared to single students. Married students comprised 7.7%, 7.9%, and 5.6% of the freshman population for 1991, 1992, and 1993, respectively. For the same period, married students accounted for 2.8%, 2.4%, and 0.3% of the debtors. Because married students

made up such a small portion of the freshman population, marital status will probably not be used as a predictor of debt.

Hypothesis 4f: Freshman debtors do not differ from the balance of the FSU freshman student body with regard to state residency status.

This hypothesis was rejected. Nonresidents were less likely to become debtors than were residents. Nonresidents made up about 5% of the freshman class. Because nonresidents made up such a small portion of the freshman population, state residency status will probably not be used as a predictor of debt.

Summary of Findings

Most Significant Finding

The researcher identified one finding as the most significant in the study. Family income of the freshman students was the most significant indicator of a student debtor. The researcher found that the debtors' average family income averaged $8,952 less than that of nondebtors. Students with a lower family income would have a higher financial need and would be more likely to become a debtor as compared to students with a higher family income. This finding indicates that the selected characteristic, family income, can be used to determine which students are most likely to become debtors.

Based on the finding concerning family income, additional research was conducted; it is summarized in Appendix C. As a result of that additional research, the researcher concluded that the other significant findings also reflect the freshman students' family income as a basis for distinguishing between debtors and

nondebtors. It was also concluded that the debtors' family income was lower than that of nondebtors, when reviewing ethnic origin, ACT composite score, cumulative grade point average, number of siblings in college, and county of residence. That is to say, selected characteristics of the freshman students--ethnic origin, ACT composite score, cumulative grade point average, number of siblings in college, and county of residence--had a direct relationship with students' family income. These relationships are discussed in further detail in the following sections.

Other Significant Findings

The researcher identified four other significant findings. These findings pertain to ethnic origin, ACT composite score, cumulative grade point average, and number of siblings in college. These four characteristics can be used as predictors of debtors. These findings were supported by the research using the characteristics individually and the additional research summarized in Appendix C. The significant findings are as follows:

1. The ethnic origin of the freshman students was a significant indicator of a student debtor. The researcher found that black students accounted for 15% of the total freshman student population; however, black students accounted for 52% of the freshman debtors.

The research reported in Appendix C also indicated that black students' family income was less than white students' family income; the difference in incomes increased from $509 to $6,954 when comparing all students in each ethnic category from 1991 to 1993. In 1991, 1992, and 1993, respectively, the number of black

students becoming debtors was 66, 114, and 172, whereas the number of white students becoming debtors in those years was 68, 83, and 113. The Hispanic, Native American, and Asian ethnic groups averaged 53, 47, and 36 freshman students and 2, 6, and 0 debtors for 1991, 1992, and 1993, respectively. Because these three ethnic-origin groups accounted for such a small number of freshman students and debtors, no conclusion was drawn about the likelihood of students from these ethnic groups becoming debtors.

2. The ACT composite test scores of the freshman students were also a significant indicator of a student debtor. The researcher found that the students with the lowest ACT composite test scores were most likely to become debtors. Freshman students with an ACT composite score of 16 or less accounted for 29% of the total freshman population; however, this same group accounted for 50% of all the freshman student debtors.

Additional research was conducted on family income and students' ACT composite score. It was found that family income increased as ACT composite scores increased. Freshman students' family income by ACT composite score range is summarized in Appendix C. A continual upward trend in family income was noted from the lowest ACT composite score grouping of under 11 to the highest grouping of over 25. The family income of freshmen in the over-25 ACT composite score group was two times larger in 1991 and 1992 and three times larger in 1993. This difference was considered significant.

3. The cumulative grade point averages of the freshman students were a significant indicator of a student debtor. The researcher found that the freshman students who achieved less than a 1.50 cumulative grade point average were most likely to become debtors. Students who achieved below a 1.5 cumulative grade point average accounted for 16% of the freshman student population; however, they accounted for 47% of the freshman debtors.

Additional research was conducted, and it was found that as the freshman students' cumulative grade point average increased, their family income also increased. The results are summarized in Appendix C. The family income of the debtors averaged less than that of the nondebtors within the same cumulative grade point ranges. Therefore, as family income increased, students' cumulative grade point averages also increased.

Freshman students with a cumulative grade point average over 3.5 evidenced a decline in family income. This high academic group had very few debtors because the students fit one of the following two profiles. They came from either a low family income/high scholarship profile or a high family income profile.

4. The number of siblings in college was a significant indicator of a student debtor. The researcher found that freshman students with one sibling in college were most likely to become debtors. The freshman students with one sibling in college accounted for 34% of the freshman student population; however, this same group accounted for 51% of the freshman debtors.

Additional research was conducted to determine whether family income increased with the number of siblings in college. The researcher found that the average family income did increase with the number of siblings in college, with the exception of students with no siblings in college. A large number of students with no siblings in college also did not report family income. The number of siblings in college was not as conclusive an indicator when compared to family income of students with no siblings in college; however, an upward trend in family income was evident as the number of siblings in college increased. The family income by sibling data are summarized in Appendix C.

Less Significant Finding

Although the finding regarding county of residence was less significant than the other findings, the researcher determined that it needed to be mentioned. The researcher found that freshmen from Wayne County were more likely to become debtors than were those from any other Michigan county. This sole county was significant due to the proportion of debt created by this group of students. The freshmen from Wayne County comprised 13% of the freshman student population; however, they accounted for 36% of the freshman debtors.

Additional research was carried out to determine whether any difference existed in family income by county. The results summarized in Appendix C show that a difference did exist. Students from Wayne County did, in fact, have an average family income that was less than that of the average of all counties, excluding Genesee, Kent, Mecosta, Oakland, and Wayne counties. Those five

counties accounted for 44%, 45%, and 42% of the freshman student population for 1991, 1992, and 1993, respectively. As indicated earlier, family income did have a direct effect on all of the characteristics used to identify debtors in this study.

The findings summarized above are those found to be significant. Five of the six findings discussed above pertain to information that is available to the university before a student is admitted. The exception is students' grade point average, which they achieve after enrollment. Having five predictors of student debtors is important because this gives the university an opportunity to manage its future debt. The university can determine which students are most likely to become debtors. The most significant characteristic in determining a debtor was the student's family income. Ethnic origin, ACT composite score, number of siblings in college, grade point average, and county of residence also were related to the student's family income. Although all of the findings can be used to predict debtors from nondebtors, no predictions can be made with total accuracy.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS FOR PRACTICE, IMPLICATIONS FOR RESEARCH, AND REFLECTIONS

Introduction

This chapter contains a summary of the study and the research findings. Conclusions are drawn from the findings, and recommendations are made for practice and future research. The researcher's reflections are shared as the ramifications of the findings and conclusions are considered.

The researcher's primary purpose in this study was to compare FSU freshman students identified as debtors with students identified as nondebtors to determine whether any differences existed between the two groups in terms of admission, financial aid, academic success and student demographic characteristics. The study included students enrolled in the Fall 1991, 1992, and 1993 terms. The student debtor category included those whose account balance continued to exceed $150 at the end of the following term. The primary reasons for waiting for an additional term were that many students pay at the beginning of the next term before enrolling for classes and that some students delay in applying for financial aid. The student account receivable is, in many cases, paid after the term or shortly after; therefore the researcher attempted to ensure that the students who were studied had the highest probability of being debtors.

The relationship of the selected student-borrower variables to the propensity to become a debtor was investigated. The viability of an institutional model to predict a debtor was explored, using those selected variables that were found to have a relationship to debtors. Ideally, the findings could be used not only as admissions criteria, but also as predictors of becoming a debtor. Students who match a specific profile could be counseled as to their financial obligations and/or additional institutional financial aid would be made available to students who match a specific high-risk profile. No model to define a high-risk student was developed in this study.

Summary

Student tuition and housing revenue is the largest source of revenue for FSU. During the past five years, the student account receivable balances at FSU have been increasing. Freshman students were studied to determine whether selected student characteristics can be used to predict nondebtors and debtors. The following is a list of some of the more significant reasons the researcher identified for the increasing student debt: (a) cost of attendance is increasing at a pace much faster than the CPI, (b) family income has been decreasing in real terms, (c) state appropriations have been flat or declining, and (d) financial aid grant dollars have been flat at a time when student need is increasing. The increasing cost of education has been exceeding the CPI since the early 1980s.

The cost of tuition and campus housing at FSU has increased from $5,004 in 1989 to $7,583 in 1994. The family income of the typical FSU student has averaged $37,245 from 1989 to 1994. The family income for the same period,

adjusted for inflation using the CPI, has decreased by $6,846. Because grant funding has not changed significantly in the past eight years, students have been forced to become debtors to the university and/or the various loan funds. The amount of student borrowing has increased to levels exceeding $20,000 for some students.

The average account receivable debt for a FSU freshman has been increasing annually. The average account receivable debt was $639, $767, and $1,201 for 1991, 1992, and 1993, respectively. For the same period, the number of debtors owing more than $150 also increased, with 144, 210, and 307 debtors for 1991, 1992, and 1993, respectively. The total debt also has increased annually, with total debt of $92,003 in 1991, $161,039 in 1992, and $368,582 in 1993. The university cannot absorb these increases without affecting its financial stability. The researcher did, in fact, point to some variables that can be used to reduce the risk of debt to the university. Ideally, the findings may be used to restrict enrollment and/or to better counsel the higher-risk students in order to improve their opportunity for financial success.

The most significant variable found to predict debt was family income. Other characteristics, such as ethnic origin, ACT composite score, student grade point average, number of siblings in college, and county of residence, also may be used to identify debtors from nondebtors. Using the identified findings, a university could define the profile of a potential student debtor. The university could become proactive in reducing debt by informing students who meet a predetermined profile of the options available in order to improve their financial and academic success.

The researcher found no predictor from the characteristics studied that would predict a student debtor with total accuracy. Also, no part of the study was intended to restrict students' access to higher education. However, higher education institutions must be confident that resources are available to meet the financial aid need of accepted students. The student's socioeconomic background is considered a good predictor of academic success. The researcher also believes the findings from the study indicated the student's socioeconomic background is a predictor of the student's financial success. The researcher found the proportion of debtors to the whole population (Table 1) was not large enough to statistically predict debtors from nondebtors. Appendix D contains a multiple regression equation and correlation matrix for the three years of the study.

Conclusions

Most Significant Conclusions

Prediction of a student's propensity to become a debtor can be accomplished, based on the findings from this study. The best predictor of a student's becoming a debtor is the freshman student's family income. Students with a lower family income will have a higher financial need and the greatest chance of becoming debtors. The family income of the debtors in this study was lower than that of the nondebtors.

The researcher discovered that family income also had a direct relationship to the other significant variables in the study. These were ethnic origin, ACT composite score, cumulative grade point average, number of siblings in college, and county of residence.

Because family income was found to be the most significant variable, additional research was conducted; results of that analysis may be found in Appendix C. The family income of FSU students has not been increasing, but has remained constant, according to the summary provided to the university by the ACT Service. However, when these figures are adjusted for inflation, it can be seen that the FSU students' family income has been declining in real terms. The demographics for Michigan also show that the available pool of students are from the less affluent portion of the economic strata.

As the cost of education continues to increase and family income is not expected to absorb the increased cost, the university will continue to experience bad debts. This problem can be predicted and managed if family income is reviewed to determine whether a student does have the ability to meet his or her financial commitment to the university. The researcher found that perceived ability to pay, using family income as a measurement, is not exact in and of itself.

The finding regarding family income is of particular concern when coupled with the United States Congress's attempt to define the future role of the federal government in student financial aid. Based on current information, funding will be decreased and interest subsidies on loans may be reduced or eliminated. These changes may most affect the students who are most in need--that is, those with the lowest family income. However, all students will be affected, as will the university.

Other Significant Conclusions

Four other variables were significant predictors of debtors. These were ethnic origin, ACT composite score, number of siblings in college, and cumulative grade

point average. These findings were supported by the research using the characteristics individually and the additional research summarized in Appendix C, which indicated a direct and/or indirect relationship of the particular characteristic to family income. The significant conclusions are as follows:

1. The ethnic origin of the freshmen was a significant indicator of a debtor. The researcher found that black students accounted for 15% of the total freshman population; however, black students accounted for 52% of the freshman debtors. This is considered significant because more than half of the student debtors were blacks.

Additional research was conducted to determine whether a relationship existed between race and family income. It was found that such a relationship did exist. Black students' family income was less than that of white students; the difference increased from $509 to $6,954 when comparing all students in each ethnic category from 1991 to 1993. The number of black students becoming debtors was 66, 114, and 172, compared to 68, 83, and 113 white students in 1991, 1992, and 1993, respectively. These numbers do not begin to be proportional to these students' representation in the freshman population.

The number of freshmen who were Hispanic, Native American and Asian averaged 53, 47, and 36 in the three years under investigation; of those students, 2, 6, and 0 were debtors in the respective years. Because students of these three ethnic origins accounted for such a small portion of the freshman population and the debtor group, no conclusion was drawn except that Asian students are least likely to become debtors.

The researcher concluded that ethnic origin does play a significant part in determining a debtor. Black students constituted the highest proportion of debtors of the five ethnic groups studied. Of the 109 Asian freshmen, only one became a debtor. Ethnic-origin data are available before a student is admitted to the university. Thus, ethnic origin could be used in profiling future applicants.

2. The ACT composite test score of freshman students was a significant indicator of a student debtor. The researcher concluded that students with the lowest ACT composite test scores were the most likely to become debtors. Students with an ACT composite score of 16 or less accounted for 29% of the total freshman population; however, this same group accounted for 50% of all the freshman student debtors.

Additional research was conducted to determine whether a relationship existed between students' ACT composite score and their family income. It was found that family income did increase as ACT composite scores increased (see Appendix C). There was a continual upward trend in family income from the lowest ACT composite score group (under 11) to the highest group (over 25). The increases in family income between the two ACT composite score groups were two times higher for 1991 and 1992 and three times higher for 1993.

The researcher concluded that the ACT composite score was a significant indicator of a student's becoming a debtor. In addition, the ACT composite score is available before students are accepted to the university.

3. Freshman students' grade point average was a significant indicator of a student debtor. It was found that freshmen who achieved less than a 1.5 grade

point average were most likely to become debtors. Students who had below a 1.5 grade point average accounted for 16% of the freshman student population; however, they accounted for 47% of the freshman debtors.

Additional research was conducted to determine whether a relationship existed between students' grade point average and family income. It was found that as the freshman students' cumulative grade point average increased, their family income also increased (see Appendix C). The family income of the debtors averaged less than that of the nondebtors in the same grade point ranges.

Freshman students with a cumulative grade point average over 3.5 evidenced a decline in family income. This high academic group were found to be nondebtors because the students fit one of the following two profiles. They fit either a low family income/high scholarship or a high family income profile.

Therefore, it was concluded that as family income increased, cumulative grade point average also increased for the FSU freshman student population. Cumulative grade point average is thus a predictor of a debtor. Students with the lowest academic performance have the highest propensity to become debtors. The cumulative grade point average is available once a student is enrolled and completes a term of academic study. Unlike the other indicators, students' cumulative grade point is not available to the university before admission or enrollment. Cumulative grade point average can be used to determine whether students should be allowed more time to prove themselves if they have an outstanding student account balance.

4. The number of siblings in college was also a significant indicator of a student debtor. It was found that freshman students with one sibling in college were the most likely to become debtors. The freshmen with one sibling in college accounted for 34% of the freshman student population; however, this same group accounted for 51% of the freshman debtors.

Additional research was conducted to determine whether a relationship existed between family income and the number of siblings in college. It was found that the average family income did increase as the number of siblings in college increased, with the exception of families of freshmen with no siblings in college. A large number of students with no siblings in college also did not report family income. Having siblings in college was not as conclusive when compared to family income as was having no siblings in college; however, an upward trend in family income was found as the number of siblings in college increased (see Appendix C).

Students with one sibling in college were the most likely to become debtors. Information on the number of siblings in college would be available to the university before freshmen enrolled.

It was concluded that none of the preceding characteristics is a prefect indicator of future debtors. However, the significant indicators can help establish which students have the highest potential of becoming debtors. The four significant indicators, individually, accounted for more than half of the debtors.

Less Significant Conclusion

Although county of residence was a less significant indicator, the researcher determined that it needed to be identified. It was found that freshman students from

Wayne County were more likely to become debtors than were students from any other county in Michigan. This sole county was significant due to the proportion of debt that is created by this group of students. The freshmen from Wayne County constituted 13% of the freshman population; however, they accounted for 36% of the freshman debtors. With such a significant proportion of debtors confined to one county, the researcher concluded that this indicator was in the less significant category.

Additional research was conducted to determine whether a relationship existed between family income of freshman students and their county of residence. As shown in Appendix C, a relationship did exist between average family income and county of residents. Students from Wayne County did, in fact, have a lower average family income than the average of the other counties except Genesee, Kent, Mecosta, Oakland, and Wayne. These five counties, combined, accounted for 44%, 45%, and 42% of the freshman student population in 1991, 1992, and 1993, respectively. Thus, county of residence did have a relationship to family income and can be used to identify debtors.

The indicators discussed above are those found to be significant. Information on five of the six indicators is available to the university before a student is either admitted or enrolled. The exception is cumulative grade point average, which a student achieves after enrollment. The fact that the university has information available on five predictors of student debtors before a student is admitted or enrolled is significant because using this information gives the university an opportunity to manage its future debt by identifying those characteristics that are

most likely to predict debtors. The most significant indicator identified in this study was family income. Ethnic origin, ACT composite score, grade point average, number of siblings in college, and county of residence also were related indirectly or indirectly to students' family income and are predictors of debtors.

Other characteristics that were studied, such as application date, financial aid need, age, marital status, and residency status, can be used to predict debtors, as well. Although these characteristics were not as significant in predicting debtors, they are additional areas that can be used collectively or individually with the significant characteristics to better predict which students have the highest risk of becoming debtors.

Recommendations for Practice

The following recommendations for practice could reduce universities' exposure to increasing student account receivables. However, for many universities, the recommendations may not be viable options.

1. Need-blind admission practices need to be reviewed. Colleges and universities can no longer ignore the financial background of the student applicant. Although changing to a need-conscious admission practice would be a significant deviation from generally accepted admission practices, it should be considered in order to reduce the institution's exposure to student debt. A proportion of students must be admitted regardless of their financial background; however, universities will not be able to absorb the student debt, nor will they be able to provide full aid to all students demonstrating financial need.

2. The university can play an active part in reducing debt. To become active in the management of debt, the university should develop a model that would identify students who correspond to an established profile. Reviewing the findings of the study would give the university established characteristics that could be used to profile student applicants. Of the six characteristics identified as significant, five are available to the university before a student enrolls.

3. The university should continuously monitor the student account balance to make sure it is current. Once a student account becomes past due, the university should contact the student directly to determine what the problem might be. It is at this most critical point that a student may have some options to pay his or her past due student account balance. If the university is proactive in the management of student debt, the student and university will both be successful.

The characteristics identified in this study should be reviewed jointly to give the best picture of a student's potential for becoming a debtor. Students corresponding to an established profile could be rejected in the admission process, those with the greatest need and ability could be provided adequate financial aid, or counseling could be offered to high-risk students; these are some alternatives that could make students succeed both academically and financially. To implement any of these recommendations, however, approval by the university administration and board of trustees would be required.

Implications for Future Research

The factors a freshman student must cope with during the transition to university life are many and diverse, and they affect each student differently. The

issue of limited student resources and the resulting inability of students to pay their university financial obligations needs additional research. The financial resources would include financial aid resources, student resources, family resources, and any other source from which the student can secure funds to cover his or her academic costs.

Because this was an institutionally based study, the findings and conclusions are useful to FSU, its students, and perhaps similar institutions. This study was designed to evaluate the FSU freshman student population with respect to selected admission, financial aid, academic success, and demographic variables; it could be used to implement similar studies and parallel analysis at other institutions. The outcome may be useful to analyze the institutions' environment and to design specific strategies for their populations. The researcher would expect similar results at other institutions.

1. The first implication for further research is to review the university's admission policy to determine whether the process itself is part of the reason why students become debtors. The Admissions Office's successful recruitment of good students is important to the well-being and longevity of the institution. However, the wholesale recruitment of students who only meet an academic standard and have no ability to pay is not in the best interest of the university or the student. The admission policy could be studied to determine whether the need-blind admission policy should be changed to a need-conscious policy. This change has many political ramifications, and the university must be willing to do what is best for the institution and not bow to political pressure. It is important to be sure the students'

well-being is considered in such a study. Both the university and the student must be successful in the process.

2. A second implication for further research would be to develop a contribution-to-margin model. By developing such a model, the analysis would need to determine at what point the students are at least covering the variable cost of their education and the services they receive. Student must pay an amount that exceeds the variable cost so they will contribute some dollars to cover a portion of the fixed cost. The university must determine the point at which to say no to student applicants. The university needs to determine how many students it is willing to accept who may be able to contribute something to cover the fixed costs of the university but do not have the ability to pay all of their college expenses. Most businesses would require a credit check before offering credit to their customers. Likewise, colleges and universities need to review the risk associated with their students (customers). Such a study would be helpful in assessing how much the university could risk before the aged account receivables would have a negative effect on the student and the university.

3. A third implication for further research would be to review various payment-plan options. The study would be used to determine whether a change in the method of collecting student account receivables and/or the expansion of time to make payments on the student account would reduce the amount of the student account receivable that becomes a debt. The public four-year institutions in Michigan have a variety of methods and timing for making payments. The study

would determine whether any of the available options improve the payment of student accounts.

4. A fourth implication for further research would be to continue to collect data from this study for future years and follow the trend. The major areas in which to continue the study would include the factors on which information is available before a student enrolls at the university. These include the ACT composite score, financial aid need, financial aid awarded and family income. This type of study could lend itself to a controlled experiment in which a group of students identified as high risk could be used to create a reasonably accurate prediction model of potential debtors.

5. A fifth implication for further research would be to study the high schools from which students graduated. This would help determine whether a potential debtor could be identified based only on the high school attended. The students' grade point averages could be looked at along with the high schools. Variations in grade points by school would make using the grade point more difficult; however, this could help predict students' academic success.

6. Finally, the ability to predict the debtor as compared to the nondebtor among the freshman student population was explored in this study. A study of all students, not only freshmen, would be helpful in determining at what academic level students have a smaller chance of becoming debtors.

The major reason for any additional study is to make the university experience successful for both the student and the university. The student who is not concerned about finances will, in most cases, have problems with debt. The

results of the suggested studies could assist in identifying effective debt-reduction strategies.

Reflections

Through reflection and discussion with other professionals, the researcher used an occasion at a Michigan Association of Business Office Managers meeting to review the findings and discuss possible implications with a diverse group of student account receivable professionals. This exercise assisted in validating some thoughts and observations for the purpose of discussion.

First, universities have a clear role in the prevention of debt. Universities can no longer expect students to continue to accumulate additional debt. The debt students accumulate includes student loans and the account receivable to the university. University administrators need to change their thinking to incorporate a need-conscious standard, in contrast to the current need-blind standard. Universities have the ability to help the number of students they can afford to help with the existing level of financial aid. Institutions will no longer be able to support the wholesale admission of students.

Second, the financial aid, registrar, admission, and businesses offices should try to develop a plan to reduce the amount of debt students are allowed to accumulate. The amount of debt students have accumulated could be reviewed during the complete time students are enrolled at the university. This practice should be approved by the upper university administration and the board of trustees. Their approval will, in the long term, make for a stronger institution and a more successful student body. Adopting a need-conscious admission policy may require

a change in the Statement of Principles of Good Practice in College Admissions and Recruitment. Although this statement is national in scope, perhaps colleges and universities can no longer recruit students on the basis of academic and personal criteria and not include financial need among those criteria. With a funding gap, financial need must be used to determine admission to the university.

At what point(s) might intervention by the university be most beneficial in lowering the risk of a student's becoming a debtor? At present, students who receive federal financial aid are mandated to attend an entrance interview before receiving their aid. This regulatory requirement outlines the students' responsibility in repaying their loans and makes them aware that they must attend an exit interview when they leave the university. The purpose of the exit interview is to outline the students' financial obligation and how to begin repaying their loans. The entrance interview should be available to non-financial-aid students, as well. Currently, all enrolled students receive an invoice detailing all the costs (charges) and the credit, such as payments plus the financial aid they have received. The intervention should take place before students arrive on campus. What type of intervention is necessary, as suggested by the study findings, merits discussion. Due to the preponderance of critical differences that are related to admission variables, financial aid variables, academic success variables, and demographic variables will become evident along the students' educational continuum. Students' performance and the stabilization of their enrollment pattern may be the most effective method of lowering the students' risk of becoming debtors.

APPENDICES

APPENDIX A

COUNTY OF RESIDENCE OF NONDEBTORS AND DEBTORS

APPENDIX A										
DEBTORS BY COUNTY										
FALL TERM, YEAR		1991	1991	1991	1992	1992	1992	1993	1993	1993
COUNTY										
ALCONA	n	4	0	4	5	0	5	2	0	2
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1
ALGER	n	5	0	5	2	0	2	3	0	3
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1
ALLEGAN	n	39	3	42	39	0	39	31	2	33
	Row %	92.9	7.1	100.0	100.0	0.0	100.0	93.9	6.1	100.0
	Col %	0.9	2.1	1.0	1.0	0.0	1.0	0.9	0.7	0.9
ALPENA	n	7	1	8	22	0	22	24	0	24
	Row %	87.5	12.5	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.2	0.7	0.2	0.6	0.0	0.5	0.7	0.0	0.6
ANTRIM	n	25	0	25	19	1	20	20	2	22
	Row %	100.0	0.0	100.0	95.0	5.0	100.0	90.9	9.1	100.0
	Col %	0.6	0.0	0.6	0.5	0.5	0.5	0.6	0.7	0.6
ARENAC	n	8	0	8	8	0	8	10	0	10
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.2	0.0	0.2	0.2	0.0	0.2	0.3	0.0	0.3
BARAGA	n	2	1	3	5	1	6	6	0	6
	Row %	66.7	33.3	100.0	83.3	16.7	100.0	100.0	0.0	100.0
	Col %	0.0	0.7	0.1	0.1	0.5	0.1	0.2	0.0	0.2
BARRY	n	21	0	21	11	1	12	13	0	13
	Row %	100.0	0.0	100.0	91.7	8.3	100.0	100.0	0.0	100.0
	Col %	0.8	0.0	0.5	0.3	0.5	0.3	0.4	0.0	0.3
BAY	n	34	1	35	39	0	39	40	0	40
	Row %	97.1	2.9	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.8	0.7	0.8	1.0	0.0	1.0	1.2	0.0	1.1
BENZIE	n	17	0	17	10	0	10	7	0	7
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.4	0.0	0.4	0.3	0.0	0.2	0.2	0.0	0.2
BERRIEN	n	50	4	54	48	2	50	61	4	65
	Row %	92.6	7.4	100.0	96.0	4.0	100.0	93.8	6.2	100.0
	Col %	1.2	2.8	1.2	1.3	1.0	1.2	1.8	1.3	1.7

APPENDIX A - Continued										
		1991	1991	1991	1992	1992	1992	1993	1993	1993
BRANCH	n	20	0	20	18	0	18	15	1	16
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	93.7	6.3	100.0
	Col %	0.5	0.0	0.5	0.5	0.0	0.4	0.4	0.3	0.4
CALHOUN	n	32	2	34	30	0	30	20	2	22
	Row %	94.1	5.9	100.0	100.0	0.0	100.0	90.9	9.1	100.0
	Col %	0.8	1.4	0.8	0.8	0.0	0.7	0.6	0.7	0.6
CASS	n	18	0	18	18	0	18	14	0	14
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.4	0.0	0.4	0.5	0.0	0.4	0.4	0.0	0.4
CHARLEVOIX	n	16	0	16	5	0	5	16	1	17
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	94.1	5.9	100.0
	Col %	0.4	0.0	0.4	0.1	0.0	0.1	0.5	0.3	0.5
CHEBOYGAN	n	13	0	13	22	0	22	21	2	23
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	91.3	8.7	100.0
	Col %	0.3	0.0	0.3	0.6	0.0	0.5	0.6	0.7	0.6
CHIPPEWA	n	15	0	15	20	1	21	17	1	18
	Row %	100.0	0.0	100.0	95.2	4.8	100.0	94.4	5.6	100.0
	Col %	0.4	0.0	0.3	0.5	0.5	0.5	0.5	0.3	0.5
CLARE	n	17	0	17	8	0	8	15	0	15
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.4	0.0	0.4	0.2	0.0	0.2	0.4	0.0	0.4
CLINTON	n	34	1	35	28	0	28	36	1	37
	Row %	97.1	2.9	100.0	100.0	0.0	100.0	97.3	2.7	100.0
	Col %	0.8	0.7	0.8	0.7	0.0	0.7	1.0	0.3	1.0
CRAWFORD	n	17	0	17	8	1	9	8	0	8
	Row %	100.0	0.0	100.0	88.9	11.1	100.0	100.0	0.0	100.0
	Col %	0.4	0.0	0.4	0.2	0.5	0.2	0.2	0.0	0.2
DELTA	n	10	0	10	7	0	7	12	0	12
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.2	0.0	0.2	0.2	0.0	0.2	0.3	0.0	0.3
DICKINSON	n	9	1	10	13	0	13	13	0	13
	Row %	90.0	10.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.2	0.7	0.2	0.3	0.0	0.3	0.4	0.0	0.3
EATON	n	38	2	40	31	1	32	35	1	36
	Row %	95.0	5.0	100.0	96.9	3.1	100.0	97.2	2.8	100.0
	Col %	0.9	1.4	0.9	0.8	0.5	0.8	1.0	0.3	1.0

APPENDIX A - Continued										
		1991	1991	1991	1992	1992	1992	1993	1993	1993
EMMET	n	10	0	10	16	0	16	10	1	11
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	90.9	9.1	100.0
	Col %	0.2	0.0	0.2	0.4	0.0	0.4	0.3	0.3	0.3
GENESEE	n	222	9	231	227	16	243	182	17	199
	Row %	96.1	3.9	100.0	93.4	6.6	100.0	91.5	8.5	100.0
	Col %	5.2	6.3	5.5	5.9	8.0	6.0	5.3	5.7	5.3
GLADWIN	n	14	0	14	16	0	16	12	1	13
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	92.3	7.7	100.0
	Col %	0.3	0.0	0.3	0.4	0.0	0.4	0.3	0.3	0.3
GOGEBIC	n	2	0	2	6	0	6	4	0	4
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.1
GRAND	n	69	0	69	41	0	41	38	0	38
TRAVERSE	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	1.6	0.0	1.6	1.1	0.0	1.0	1.1	0.0	1.0
GRATIOT	n	29	0	29	42	2	44	33	0	33
	Row %	100.0	0.0	100.0	95.5	4.5	100.0	100.0	0.0	100.0
	Col %	0.7	0.0	0.7	1.1	1.0	1.1	1.0	0.0	0.9
HILLSDALE	n	10	0	10	7	2	9	7	0	7
	Row %	100.0	0.0	100.0	77.8	22.2	100.0	100.0	0.0	100.0
	Col %	0.2	0.0	0.2	0.2	1.0	0.2	0.2	0.0	0.2
HOUGHTON	n	5	0	5	8	0	8	11	0	11
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.1	0.0	0.1	0.2	0.0	0.2	0.3	0.0	0.3
HURON	n	40	1	41	53	1	54	26	1	27
	Row %	97.6	2.4	100.0	98.1	1.9	100.0	96.3	3.7	100.0
	Col %	0.9	0.7	0.9	1.4	0.5	1.3	0.8	0.3	0.7
INGHAM	n	73	3	76	61	4	65	56	7	63
	Row %	96.1	3.9	100.0	93.8	6.2	100.0	88.9	11.1	100.0
	Col %	1.7	2.1	1.7	1.6	2.0	1.6	1.6	2.3	1.7
IONIA	n	45	0	45	41	3	44	27	0	27
	Row %	100.0	0.0	100.0	93.2	6.8	100.0	100.0	0.0	100.0
	Col %	1.1	0.0	1.0	1.1	1.5	1.1	0.8	0.0	0.7
ISABELLA	n	74	0	74	42	0	42	44	2	46
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	95.7	4.3	100.0
	Col %	1.7	0.0	1.7	1.1	0.0	1.0	1.3	0.7	1.2

APPENDIX A - Continued										
		1991	1991	1991	1992	1992	1992	1993	1993	1993
IOSCO	n	21	0	21	17	0	17	15	2	17
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	88.2	11.8	100.0
	Col %	0.5	0.0	0.5	0.4	0.0	0.4	0.4	0.7	0.5
IRON	n	17	0	17	10	1	11	7	0	7
	Row %	100.0	0.0	100.0	90.9	9.1	100.0	100.0	0.0	100.0
	Col %	0.4	0.0	0.4	0.3	0.5	0.3	0.2	0.0	0.2
JACKSON	n	48	0	48	42	2	44	33	2	35
	Row %	100.0	0.0	100.0	95.5	4.5	100.0	94.3	5.7	100.0
	Col %	1.1	0.0	1.1	1.1	1.0	1.1	1.0	0.7	0.9
KALAMAZOO	n	56	0	56	30	1	31	40	2	42
	Row %	100.0	0.0	100.0	96.8	3.2	100.0	95.2	4.8	100.0
	Col %	1.3	0.0	1.3	0.8	0.5	0.8	1.2	0.7	1.1
KALKASKA	n	12	1	13	5	0	5	10	0	10
	Row %	92.3	7.7	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.3	0.7	0.3	0.1		0.1	0.3	0.0	0.3
KENT	n	221	10	231	193	10	203	240	9	249
	Row %	95.7	4.3	100.0	95.1	4.9	100.0	96.4	3.6	100.0
	Col %	5.2	7.0	5.3	5.0	5.0	5.0	7.0	3.0	6.6
KEWEENAW	n	3	0	3	1	0	1	0	0	0
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0
	Col %	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
LAKE	n	26	2	28	17	2	19	29	2	31
	Row %	92.9	7.1	100.0	89.5	10.5	100.0	93.5	6.5	100.0
	Col %	0.6	1.4	0.6	0.4	1.0	0.5	0.8	0.7	0.8
LAPEER	n	53	0.00	53	32	3	35	46	3	49
	Row %	100.0	0.0	100.0	91.4	8.6	100.0	93.9	6.1	100.0
	Col %	1.2	0.0	1.2	0.8	1.5	0.9	1.3	1.0	1.3
LEELANAU	n	13	1	14	8	0	8	7	0	7
	Row %	92.9	7.1	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.3	0.7	0.3	0.2	0.0	0.2	0.2	0.0	0.2
LENAWEE	n	24	0	24	32	1	33	44	2	46
	Row %	100.0	0.0	100.0	97.0	3.0	100.0	95.7	4.3	100.0
	Col %	0.6	0.0	0.5	0.8	0.5	0.8	1.3	0.7	1.2
LIVINGSTON	n	71	1	72	63	0	63	36	4	40
	Row %	98.6	1.4	100.0	100.0	0.0	100.0	90.0	10.0	100.0
	Col %	1.7	0.7	1.6	1.6	0.0	1.6	1.0	1.3	1.1

APPENDIX A - Continued										
		1991	1991	1991	1992	1992	1992	1993	1993	1993
LUCE	n	4	0	4	6	0	6	6	0	6
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.1	0.0	0.1	0.2	0.0	0.1	0.2	0.0	0.2
MACKINAC	n	7	0	7	7	0	7	6	1	7
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	85.7	14.3	100.0
	Col %	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.3	0.2
MACOMB	n	172	3	175	127	10	137	98	8	106
	Row %	98.3	1.7	100.0	92.7	7.3	100.0	92.5	7.5	100.0
	Col %	4.0	2.1	4.0	3.3	5.0	3.4	2.8	2.7	2.8
MANISTEE	n	31	0	31	16	0	16	18	0	18
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.7	0.0	0.7	0.4	0.0	0.4	0.5	0.0	0.5
MARQUETTE	n	21	1	22	15	0	15	13	0	13
	Row %	95.5	4.5	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.5	0.7	0.5	0.4	0.0	0.4	0.4	0.0	0.3
MASON	n	19	1	20	9	1	10	22	4	26
	Row %	95.0	5.0	100.0	90.0	10.0	100.0	84.6	15.4	100.0
	Col %	0.4	0.7	0.5	0.2	0.5	0.2	0.6	1.3	0.7
MECOSTA	n	590	13	603	481	11	492	363	18	381
	Row %	97.8	2.2	100.0	97.8	2.2	100.0	95.3	4.7	100.0
	Col %	13.9	9.1	13.7	12.6	5.5	12.2	10.5	6.0	10.2
MENOMIMEE	n	2	0	2	3	0	3	4	0	4
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1
MIDLAND	n	51	2	53	48	0	48	38	1	39
	Row %	96.2	3.8	100.0	100.0	0.0	100.0	97.4	2.6	100.0
	Col %	1.2	1.4	1.2	1.3	0.0	1.2	1.1	0.3	1.0
MISSAUKEE	n	23	1	24	24	0	24	14	0	14
	Row %	95.8	4.2	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.5	0.7	0.5	0.6	0.0	0.6	0.4	0.0	0.4
MONROE	n	16	0	16	13	0	13	22	1	23
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	95.7	4.3	100.0
	Col %	0.4	0.0	0.4	0.3	0.0	0.3	0.6	0.3	0.6
MONTCALM	n	56	0	56	53	2	55	40	2	42
	Row %	100.0	0.0	100.0	96.4	3.6	100.0	95.2	4.8	100.0
	Col %	1.3	0.0	1.3	1.4	1.0	1.4	1.2	0.7	1.1

APPENDIX A - Continued										
		1991	1991	1991	1992	1992	1992	1993	1993	1993
MONTMORENY	n	7	0	7	9	0	9	9	0	9
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.2	0.0	0.2	0.2	0.0	0.2	0.3	0.0	0.2
MUSKEGON	n	46	3	49	52	1	53	64	14	78
	Row %	93.9	6.1	100.0	98.1	1.9	100.0	82.1	17.9	100.0
	Col %	1.1	2.1	1.1	1.4	0.5	1.3	1.9	4.7	2.1
NEWAYGO	n	68	0	68	96	2	98	87	3	90
	Row %	100.0	0.0	100.0	98.0	2.0	100.0	96.7	3.3	100.0
	Col %	1.6	0.0	1.5	2.5	1.0	2.4	2.5	1.0	2.4
OAKLAND	n	331	11	342	297	20	317	245	20	265
	Row %	96.8	3.2	100.0	93.7	6.3	100.0	92.5	7.5	100.0
	Col %	7.8	7.7	7.8	7.8	10.0	7.9	7.1	6.7	7.1
OCEANA	n	26	0	26	23	1	24	15	1	16
	Row %	100.0	0.0	100.0	95.8	4.2	100.0	93.7	6.3	100.0
	Col %	0.6	0.0	0.6	0.6	0.5	0.6	0.4	0.3	0.4
OGEMAW	n	20	1	21	9	1	10	10	0	10
	Row %	95.2	4.8	100.0	90.0	10.0	100.0	100.0	0.0	100.0
	Col %	0.5	0.7	0.5	0.2	0.5	0.2	0.3	0.0	0.3
ONTONAGON	n	2	0	2	1	0	1	0	0	0
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0
	Col %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSCEOLA	n	114	3	117	112	1	113	114	7	121
	Row %	97.4	2.6	100.0	99.1	0.9	100.0	94.2	5.8	100.0
	Col %	2.7	2.1	2.7	2.9	0.5	2.8	3.3	2.3	3.2
OSCODA	n	5	0	5	4	0	4	6	0	6
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.2
OTSEGO	n	15	0	15	13	0	13	7	0	7
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.4	0.0	0.3	0.3	0.0	0.3	0.2	0.0	0.2
OTTAWA	n	113	1	114	110	3	113	121	2	123
	Row %	99.1	0.9	100.0	97.3	2.7	100.0	98.4	1.6	100.0
	Col %	2.7	0.7	2.6	2.9	1.5	2.8	3.5	0.7	3.3
PRESQUE	n	8	0	8	8	0	8	6	1	7
ISLE	Row %	100.0	0.0	100.0	100.0	0.0	100.0	85.7	14.3	100.0
	Col %	0.2	0.0	0.2	0.2	0.0	0.2	0.2	0.3	0.2

APPENDIX A - Continued										
		1991	1991	1991	1992	1992	1992	1993	1993	1993
ROSCOMMON	n	12	0	12	9	0	9	9	0	9
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.3	0.0	0.3	0.2	0.0	0.2	0.3	0.0	0.2
SAGINAW	n	97	5	102	85	4	89	90	5	95
	Row %	95.1	4.9	100.0	95.5	4.5	100.0	94.7	5.3	100.0
	Col %	2.3	3.5	2.3	2.2	2.0	2.2	2.6	1.7	2.5
SANILAC	n	33	1	34	22	1	23	16	0	16
	Row %	97.1	2.9	100.0	95.7	4.3	100.0	100.0	0.0	100.0
	Col %	0.8	0.7	0.8	0.6	0.5	0.6	0.5	0.0	0.4
SCHOOLCRAFT	n	5	0	5	4	0	4	5	0	5
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1
SHIAWASSEE	n	28	2	30	37	0	37	31	2	33
	Row %	93.3	6.7	100.0	100.0	0.0	100.0	93.9	6.1	100.0
	Col %	0.7	1.4	0.7	1.0	0.0	0.9	0.9	0.7	0.9
ST. CLAIR	n	54	2	56	51	0	51	23	0	23
	Row %	96.4	3.6	100.0	100.0	0.0	100.0	100.0	0.0	100.0
	Col %	1.3	1.4	1.3	1.3	0.0	1.3	0.7	0.0	0.6
ST. JOSEPH	n	23	0	23	20	2	22	17	2	19
	Row %	100.0	0.0	100.0	90.9	9.1	100.0	89.5	10.5	100.0
	Col %	0.5	0.0	0.5	0.5	1.0	0.5	0.5	0.7	0.5
TUSCOLA	n	60	0	60	40	0	40	39	1	40
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	97.5	2.5	100.0
	Col %	1.4	0.0	1.4	1.0	0.0	1.0	1.1	0.3	1.1
VANBUREN	n	17	0	17	16	0	16	14	1	15
	Row %	100.0	0.0	100.0	100.0	0.0	100.0	93.3	6.7	100.0
	Col %	0.4	0.0	0.4	0.4	0.0	0.4	0.4	0.3	0.4
WASHTENAW	n	55	3	58	56	4	60	36	5	41
	Row %	94.8	5.2	100.0	93.3	6.7	100.0	87.8	12.2	100.0
	Col %	1.3	2.1	1.3	1.5	2.0	1.5	1.0	1.7	1.1
WAYNE	n	465	41	506	493	79	572	400	122	522
	Row %	91.9	8.1	100.0	86.2	13.8	100.0	76.6	23.4	100.0
	Col %	10.9	28.7	11.5	12.9	39.3	14.2	11.6	40.9	13.9
WEXFORD	n	48	5	53	35	2	37	45	5	50
	Row %	90.6	9.4	100.0	94.6	5.4	100.0	90.0	10.0	100.0
	Col %	1.1	3.5	1.2	0.9	1.0	0.9	1.3	1.7	1.3

APPENDIX B

GENERAL SUMMARY OF FSU STUDENT CHARACTERISTICS

APPENDIX B
FERRSI STATE UNIVERSITY STATISTICS

TERM	FALL, 1989	FALL, 1990	FALL, 1991	FALL, 1992	FALL, 1993	FALL, 1994
ENROLLMENT						
HEADCOUNT	11,878	12,076	12,461	12,134	11,188	10,257
% CHANGE		1.67	3.16	-2.62	-7.80	-8.32
ON-CAMPUS	11,158	11,379	11,689	11,280	10,210	9,182
% ON-CAMPUS	93.94	94.23	93.80	92.96	91.26	89.52
OFF-CAMPUS	720	697	772	854	978	1075
% OFF-CAMPUS	6.06	5.77	6.20	7.04	8.74	10.48
FEMALE	4,873	5,023	5,147	5,030	4,612	4,350
% FEMALE	41.03	41.59	41.30	41.45	41.22	42.41
MALE	7,005	7,053	7,314	7,104	6,576	5,908
% MALE	58.97	58.41	58.70	58.55	58.78	57.60
WHITE	10,944	10,818	11,007	10,441	9,528	8,639
% WHITE	92.14	89.58	88.33	86.05	85.16	84.23
BLACK	537	755	901	1,079	1,056	1,072
% BLACK	4.52	6.25	7.23	8.89	9.44	10.45
HISPANIC	92	124	116	113	120	130
% HISPANIC	0.77	1.03	0.93	0.93	1.07	1.27
NATIVE AMERICAN	45	64	81	97	99	99
% NATIVE AMERICAN	0.38	0.53	0.65	0.80	0.88	0.97
ASIAN	56	87	94	92	118	140
% ASIAN	0.47	0.72	0.75	0.76	1.05	1.36
OTHER	201	228	262	312	567	178
% OTHER	1.69	1.89	2.10	2.57	2.39	1.74

APPENDIX B - Continued						
YEAR	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
AVERAGE FAMILY INCOME						
A.C.T. AVERAGE INCOME	$ 37,830	$ 38,117	$ 36,521	$ 36,642	$ 37,282	$ 37,080
CPI	123.5	129.4	136.4	140.8	145.2	148.8
CPI % CHANGE/YR	4.7	4.8	5.4	3.2	3.1	2.5
F.I. ADJ W/CPI	$ 37,830	$ 39,938	$ 40,336	$ 41,775	$ 43,833	$ 44,676
ACT COMPOSITE SCORE	N/A	18.2	18.2	18.4	18.4	18.5
COST OF ATTENDANCE						
YEAR	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
TUITION	$ 2,223	$ 2,397	$ 2,565	$ 2,970	$ 3,222	$ 3,412
% INCREASE	27.10	7.83	7.01	15.80	8.48	5.90
HOUSING-20 MEAL PLAN	$ 2,781	$ 3,018	$ 3,318	$ 3,707	$ 3,923	$ 4,171
% INCREASE	17.90	8.52	9.94	11.70	5.83	6.32
TOTAL TUITION + HOUSING	$ 5,004	$ 5,415	$ 5,883	$ 6,677	$ 7,145	$ 7,583
% INCREASE	21.80	8.21	8.64	13.50	7.01	6.13
FINANCIAL AID SUMMARY						
YEAR	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
MAXIMUM PELL GRANT	$ 2,300	$ 2,300	$ 2,400	$ 2,300	$ 2,300	$ 2,300
TOTAL FINANCIAL AID	$ 21,023,105	$ 21,482,217	$ 27,203,983	$ 32,574,358	$ 40,086,542	$ 42,830,155
% INCREASE	N/A	2.18	26.63	19.74	23.90	6.11
FEDERAL AID	$ 14,927,458	$ 15,902,970	$ 20,157,063	$ 24,099,016	$ 31,545,658	$ 33,559,524
STATE AID	$ 1,386,106	$ 1,723,139	$ 2,059,064	$ 3,483,273	$ 3,479,129	$ 3,158,553
INSTITUTIONAL AID	$ 4,259,541	$ 3,493,459	$ 4,535,914	$ 4,546,737	$ 4,719,985	$ 4,547,252
PRIVATE AID	$ 450,000	$ 362,649	$ 451,942	$ 445,332	$ 341,770	$ 1,564,826

APPENDIX B - Continued						
LOANS	$ 8,074,936	$ 8,964,489	$ 11,894,262	$ 15,118,945	$ 23,763,646	$ 28,254,388
% LOANS/FINANCIAL AID	38.41	41.73	43.72	46.41	58.88	65.97
FEDERAL STAFFORD LOANS	$ 5,632,592	$ 6,227,640	$ 9,311,492	$ 12,716,357	$ 21,576,997	$ 23,507,769
% STAFFORD/LOANS	69.75	69.47	78.29	84.11	90.80	83.20
STATE FUNDING						
YEAR	1989/90	1990/91	1991/92	1992/93*	1993/94	1994/95
STATE APPROPRIATIONS	$ 36,024,569	$ 37,576,263	$ 36,913,928	$ 43,598,418	$ 41,861,617	$ 41,861,617
% CHANGE		4.31	-1.76	18.11	3.98	0.00
GENERAL FUND REVENUE	$ 60,472,098	$ 65,627,097	$ 67,785,492	$ 84,541,660	$ 79,571,123	$ 80,911,035
% APPROPRIATION/G.F.R.	59.57	57.26	54.46	51.57	52.61	51.74
TUITION AND FEE REVENUE	$ 23,221,496	$ 26,805,086	$ 29,787,045	$ 32,597,855	$ 36,463,726	$ 37,734,178
% TUITION/G.F.R.	38.40	40.84	43.94	38.56	45.83	46.64
* STATE APPROPRIATION INCREASE DUE TO ACCOUNTING CHANGE						
STUDENT RECEIVABLES						
YEAR	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95
ACCOUNT RECEIVABLE	$ 1,844,841	$ 1,678,050	$ 1,951,371	$ 2,016,918	$ 1,895,776	$ 2,214,370
ALLOWANCE FOR UNCOLLECTABLES	$ 193,096	$ 220,680	$ 236,000	$ 352,000	$ 320,000	$ 617,000
% UNCOLLECTABLES/ ACCT. REC.	10.41	13.15	12.09	17.45	16.88	27.86

APPENDIX C

SUMMARY OF FSU DEBTOR AND NONDEBTOR CHARACTERISTICS

APPENDIX C STUDENT CHARACTERISTICS												
	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVE.			# OF STUDENTS		
NON DEBTOR	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
BLACK	$16,946	$15,330	$ 12,990	2.01	1.99	1.85	13.7	13.7	13.1	510	555	419
HISPANIC	$13,470	$24,136	$ 25,121	2.26	2.09	2.06	13.6	15.5	13.7	50	45	57
INDIAN	$13,333	$18,281	$ 19,032	2.12	2.17	2.09	14.9	16.5	14.9	35	46	42
ASIAN	$12,528	$10,038	$ 20,376	2.16	2.52	2.39	13.9	12.3	9.9	32	30	46
WHITE	$17,352	$17,050	$ 20,506	2.47	2.47	2.37	15.5	15.3	14.7	3,743	3,277	2,972
TOTAL	$16,968	$16,851	$ 19,671	2.41	2.39	2.30	15.2	15.1	14.4	4,370	3,953	3,536
DEBTOR												
BLACK	$15,510	$12,282	$ 14,807	1.50	1.53	1.39	13.5	12.6	13.8	66	114	172
HISPANIC	$ 3,801	$22,625	$ 15,020	1.69	1.28	1.48	16.3	14.0	22.0	3	2	2
INDIAN	$19,740	$43,950	$ 36,743	0.82	0.61	1.43	17.7	16.0	16.5	7	1	10
ASIAN	$ -	$ -	$ 48,913	0.00	0.00	3.11	0.0	0.0	26.0	-	-	1
WHITE	$13,861	$17,395	$ 19,577	1.57	1.63	1.47	17.2	16.5	15.9	68	83	113
TOTAL	$14,693	$14,666	$ 17,467	1.50	1.57	1.43	15.5	14.3	14.7	144	200	298
	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
BLACK DEBTOR												
W/O ACT	$ 4,120	$10,916	$ 4,870	1.24	1.63	1.30	0.0	0.0	0.0	5	17	14
W/ACT	$16,444	$12,521	$ 15,687	1.52	1.51	1.40	14.6	14.8	15.0	61	97	158
BLACK NON-DEBTOR												
W/O ACT	$ 5,980	$10,436	$ 8,463	2.10	2.14	2.10	0.0	0.0	0.0	47	59	57
W/ACT	$18,059	$15,912	$ 13,703	2.00	1.97	1.81	15.1	15.3	15.2	463	496	362
	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
HISPANIC DEBTOR												
W/O ACT	$ -	$ -	$ -	0	0	0	0	0	0	0	0	0
W/ACT	$ 3,801	$22,625	$ 15,020	1.69	1.28	1.48	16.3	14	22	3	2	2
HISPANIC NONDEBTOR												
W/O ACT	$10,627	$ -	$ 569	2.93	2.67	2.61	0	0	0	10	2	13
W/ACT	$14,141	$25,259	$ 32,376	2.09	2.06	1.9	17	16.2	17.8	40	43	44

APPENDIX C - Continued

	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
INDIAN DEBTOR												
W/O ACT	$ -	$ -	$ 61,369	0	0	2.48	0	0	0	0	0	1
W/ACT	$19,740	$43,950	$ 34,007	0.82	0.61	1.31	17.7	16	18.3	7	1	9
INDIAN NONDEBTOR												
W/O ACT	$ -	$ -	$ 15,981	2.66	2.56	2.93	0	0	0	5	4	9
W/ACT	$15,555	$20,022	$ 19,863	2.03	2.13	1.86	17.4	18.1	18.9	40	42	33

	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
ASIAN DEBTOR												
W/O ACT	$ -	$ -	$ -	0	0	0	0	0	0	0	0	0
W/ACT	$ -	$ -	$ 48,913	0	0	3.11	0	0	26	0	0	1
ORIENTAL ND												
W/O ACT	$ -	$ -	$ 9,852	2.57	2.64	2.54	0	0	0	4	8	19
W/ACT	$14,318	$13,688	$ 27,781	2.09	2.48	2.18	15.9	16.8	16.9	28	22	27

	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
WHITE DEBTOR												
W/O ACT	$ 8,267	$ 5,739	$ 6,106	0.71	2.15	1.35	0	0	0	0	8	16
W/ACT	$14,211	$18,639	$ 21,799	1.62	1.58	1.49	18.3	18.3	18.1	64	75	97
WHITE NON-DEBTOR												
W/O ACT	$ 4,328	$ 4,965	$ 8,973	2.93	2.96	2.82	0	0	0	594	581	649
W/ ACT	$19,809	$19,655	$ 23,728	2.38	2.36	2.24	18.4	18.6	18.8	3149	2696	2323

	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
ALL STUDENTS	$17,113	$16,294	$ 18,853	2.38	2.36	2.24	15.2	15	14	4514	4271	3983
ALL NON-DEBTORS	$17,193	$16,403	$ 18,997	2.41	2.4	2.31	15.2	15	13.9	4370	4061	3676
ALL DEBTORS	$14,693	$14,186	$ 17,125	1.51	1.56	1.43	15.5	14	14.3	144	210	307

APPENDIX C - Continued

	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
DEBTORS												
W/O ACT SCORE	$ 5,962	$ 7,926	$ 7,330	1	1.74	1.37	0	0	0	9	35	31
ACT 7-10	$32,933	$21,995	$ 11,927	1.95	1.33	1.19	9	9.5	9.8	1	2	4
ACT11-13	$14,068	$13,341	$ 17,187	1.52	1.45	1.21	12.2	12	12.6	27	37	41
ACT 14-16	$16,220	$15,986	$ 15,711	1.71	1.45	1.5	15.1	15	14.9	45	61	110
ACT 17-19	$14,298	$16,421	$ 21,077	1.26	1.64	1.37	17.9	18	17.9	35	46	71
ACT 20-22	$14,632	$ 9,518	$ 22,261	1.54	1.55	1.54	20.9	21	20.7	21	20	28
ACT 23-25	$23,731	$23,109	$ 28,438	2.02	2.06	1.44	23	24	23.4	4	8	7
ACT 26+	$ 8,316	$58,327	$ 29,773	1.55	0.97	2.3	27.5	27	27	2	1	6
NON-DEBTORS												
W/O ACT SCORE	$ 4,482	$ 4,793	$ 8,895	2.87	2.87	2.75	0	0	0	660	752	747
ACT 7-10	$14,587	$ 9,843	$ 9,989	1.88	1.6	1.23	9.2	9.7	9.3	13	11	6
ACT11-13	$12,661	$14,729	$ 13,521	1.86	1.84	1.79	12.5	12.5	12.4	247	245	179
ACT 14-16	$18,564	$17,774	$ 20,066	2.13	2.08	1.95	15.1	15.2	15.1	1015	887	739
ACT 17-19	$18,407	$18,808	$ 22,283	2.34	2.29	2.14	17.9	17.9	18	1359	1166	959
ACT 20-22	$21,248	$20,639	$ 25,360	2.5	2.51	2.35	20.8	20.8	20.9	722	632	552
ACT 23-25	$25,448	$23,384	$ 27,213	2.84	2.74	2.6	23.7	23.7	23.8	256	258	245
ACT 26+	$32,080	$22,888	$ 32,741	2.87	2.94	2.92	26.8	27.3	27.4	98	110	109
	FAMILY INCOME			GRADE POINT AVE.			ACT COMPOSITE AVERAGE			# OF STUDENTS		
	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
NON-DEBTORS												
NO INC, NO ACT	$ -	$ -	$ -	2.95	2.98	2.81	0	0	0	570	641	593
NO INC, ACT	$ -	$ -	$ -	2.34	2.32	2.18	17.8	18.2	17.9	1652	1453	1299
INCOME, NO ACT	$32,871	$32,474	$ 43,144	2.34	2.25	2.51	0	0	0	90	111	154
INCOME & ACT	$34,601	$32,948	$ 42,223	2.32	2.28	2.22	18.1	18.0	18.6	2058	1856	1490

APPENDIX C - Continued

DEBTORS												
NO INC, NO ACT	$ -	$ -	$ -	0.73	1.97	1.31	0	0	0	6	12	23
NO INC, ACT	$ -	$ -	$ -	1.43	1.64	1.37	17.5	17.2	15.8	38	43	107
INCOME, NO ACT	$17,888	$17,806	$ 28,405	1.56	1.63	1.53	0	0	0	3	13	8
INCOME & ACT	$21,259	$20,467	$ 31,113	1.58	1.50	1.48	16.2	16.0	16.7	97	132	160
INCOME BY ACT	1991	1991	1992	1992	1993	1993						
ACT COMPOSITE	AFI	n	AFI	n	AFI	n						
0	5,000	745	4,945	785	7639	914						
LESS THAN 11	15,897	14	11,713	13	10764	10						
11-13	12,754	275	14,547	282	14140	221						
14-16	17,488	1,062	17,659	948	19521	855						
17-19	18,200	1,402	18,717	1212	22114	1034						
20-22	20,948	747	20,292	652	25312	581						
23-25	25,229	262	23,375	266	27247	252						
26+	31,292	101	23,208	111	32305	116						
ALL STUDENTS	16,553	4,608	16,301	4269	18853	3983						
INCOME BY SIBLING	1991	1991	1992	1992	1993	1993						
# OF SIBLINGS	AFI	n	AFI	n	AFI	n						
0	$ 840	2,332	$ 514	2,134	$ 483	1,864						
1	$30,600	1,496	$ 29,935	1,404	$ 31,161	1,397						
2	$36,973	629	$ 35,255	603	$ 41,449	587						
3	$40,623	136	$ 39,662	115	$ 47,514	116						
4	$46,029	15	$ 47,670	11	$ 43,159	18						
5	$83,478	1	$ 70,137	1	$ 39,239	1						
INCOME/MAR STAT	1991	1991	1992	1992	1993	1993						
MARITAL STATUS	AFI	n	AFI	n	AFI	n						
MARRIED	$ 2,492	354	$ 2,182	336	$ 1,542	210						
SINGLE	$17,991	4,242	$ 18,536	3,923	$ 21,094	3,525						

APPENDIX C - Continued

INCOME BY GPA	1991	1991	1992	1992	1993	1993
CUM GRADE POINT	AFI	n	AFI	n	AFI	n
0-.499	$13,486	145	$ 10,719	169	$ 15,915	281
.5-1.499	$17,011	428	$ 17,602	450	$ 18,117	543
1.5-2.499	$17,190	1,955	$ 16,855	1,766	$ 20,284	1,473
2.5-3.499	$18,195	1,706	$ 17,858	1,503	$ 20,217	1,307
3.5-4.0	$ 8,893	361	$ 8,910	365	$ 11,912	370

INCOME/RESIDENCY	1991	1991	1992	1992	1993	1993
RESIDENCY	AFI	n	AFI	n	AFI	n
RESIDENT	$17,067	4,396	$ 16,534	4,031	$ 19,031	3,747
NON-RESIDENT	$10,690	212	$ 12,363	238	$ 16,018	236

INCOME BY COUNTY	1991	1991	1991	1992	1992	1992	1993	1993	1993
COUNTY	AFI	n	%n	AFI	n	%n	AFI	n	%n
GENESEE #25	$15,812	231	5	$ 16,331	243	6	$ 19,569	199	5
KENT #41	$15,330	231	5	$ 12,811	203	5	$ 13,520	249	7
MECOSTA #54	$12,163	603	14	$ 9,454	492	12	$ 10,787	281	8
OAKLAND #63	$15,168	342	8	$ 13,448	317	8	$ 19,407	265	7
WAYNE #82	$16,317	506	12	$ 13,644	572	14	$ 16,073	522	14
ALL OTHER	$18,950	2,483	56	$ 19,674	2,204	55	$ 21,777	2,131	58

INCOME/ETHNIC ORIGIN	1991	1991	1992	1992	1993	1993
ETHNIC ORIGIN	AFI	n	AFI	n	AFI	n
BLACK	$16,781	576	$ 14,811	669	$ 13,519	591
HISPANIC	$12,923	53	$ 24,072	47	$ 24,779	59
INDIAN	$14,401	42	$ 18,827	47	$ 22,438	52
ASIAN	$12,528	32	$ 10,038	30	$ 20,983	47
WHITE	$17,290	3,811	$ 17,059	3,360	$ 20,473	3,085

APPENDIX C - Continued												
TOTAL DEBT	1991	1992	1993	1991	1992	1993						
DEBTOR	AVE	AVE	AVE	TOTAL	TOTAL	TOTAL						
BLACK	$ 642	$ 846	$ 1,180	$ 42,403	$ 96,444	$ 202,960						
HISPANIC	$ 625	$ 1,062	$ 565	$ 1,874	$ 2,124	$ 1,130						
INDIAN	$ 579	$ 442	$ 1,309	$ 4,053	$ 442	$ 13,090						
ASIAN	$ -	$ -	$ 563	$ -	$ -	$ 563						
WHITE	$ 642	$ 626	$ 1,228	$ 43,673	$ 51,958	$ 138,507						
TOTAL				$ 92,003	$ 150,968	$ 356,250						

APPENDIX D

MULTIPLE REGRESSION EQUATION AND CORRELATION MATRIX

APPENDIX D

MULTIPLE REGRESSION EQUATION AND CORRELATION MATRIX

MULTIPLE REGRESSION EQUATION

YEAR = 1991

VARIABLE	B	SE B	Beta	T	Sig T
ETHNIC ORIGIN	0.097178	0.011631	0.187632	8.35500	.000000
WAYNE COUNTY	.008669	.013085	.014606	.66300	.50770
FAMILY INCOME	-2.82070E-07	1.3707E-07	-.042016	-2.05800	.0397
SIBLINGS IN COLLEGE	-.002543	.004982	-.010384	-.511	.6097
ACT COMPOSITE	9.14796E-05	6.3626E-04	.002793	.14400	.8857
Multiple R	0.20507				
R Square	0.04205				

YEAR = 1992

VARIABLE	B	SE B	Beta	T	Sig T
ETHNIC ORIGIN	.112530	.014170	.193259	7.941	.0000
WAYNE COUNTY	.027649	.015436	.042309	1.791	.0734
FAMILY INCOME	-5.2251E-07	2.1691E-07	-.053117	-2.408	.0161
SIBLINGS IN COLLEGE	.011772	.006508	.039088	1.809	.0706
ACT COMPOSITE	-.001117	7.7216E-04	-.028628	-1.447	.1481
Multiple R	.24649				
R Square	.06076				

YEAR = 1993

VARIABLE	B	SE B	Beta	T	Sig T
ETHNIC ORIGIN	.230698	.017143	.318768	13.457	.0000
WAYNE COUNTY	.046842	.018505	.058396	2.531	.0114
FAMILY INCOME	-3.85409E-07	2.5486E-07	-.034181	-1.512	.1306
SIBLINGS IN COLLEGE	.010755	.008060	.029123	1.334	.1822
ACT COMPOSITE	9.38081E-04	8.0599E-04	.22253	1.164	.2446
Multiple R	.36333				
R Square	.13201				

APPENDIX D - Continued

MULTIPLE REGRESSION EQUATION

YEAR = COMBINED FOR 1991, 1992, AND 1993

VARIABLE	B	SE B	Beta	T	Sig T	
ETHNIC ORIGIN	.146678	.008334	.238099	17.599	.0000	
WAYNE COUNTY	.032331	.009164	.046648	3.528	.0004	
FAMILY INCOME	-3.79187E-07	1.1411E-07	-.041165	-3.323	.0009	
SIBLINGS IN COLLEGE	.005139	.003751	.016668	1.370	.1707	
ACT COMPOSITE	-2.03366E-05	4.3214E-04	-5.272E-04	-.047	.9625	
Multiple R	.27811					
R Square	.07735					

CORRELATION MATRIX

YEAR = 1991

	DEBT	ETHNIC ORIGIN	WAYNE COUNTY	FAMILY INCOME	SIBLINGS IN COLLEGE	ACT COMP
DEBT	1	.1899	.0986	-.0683	.0449	0.0121
ETHNIC ORIGIN		1	.4604	-.1213	.1557	-0.0883
WAYNE COUNTY			1	-.0499	.0744	-0.0327
FAMILY INCOME				1	.3830	0.191
SIBLINGS IN COLLEGE					1	0.0744
ACT COMPOSITE						1

CORRELATION MATRIX

YEAR = 1992

	DEBT	ETHNIC ORIGIN	WAYNE COUNTY	FAMILY INCOME	SIBLINGS IN COLLEGE	ACT COMP
DEBT	1	.2514	.1649	-.0821	.0708	-0.0325
ETHNIC ORIGIN		1	.5283	-.1970	.1881	-0.0921
WAYNE COUNTY			1	-.1354	.0882	-0.0341
FAMILY INCOME				1	.4486	0.1875
SIBLINGS IN COLLEGE					1	0.2269
ACT COMPOSITE						1

APPENDIX D - Continued						
CORRELATION MATRIX						
YEAR = 1993		ETHNIC	WAYNE	FAMILY	SIBLINGS IN	ACT
	DEBT	ORIGIN	COUNTY	INCOME	COLLEGE	COMP
DEBT	1	.3494	.2293	-.0909	.0836	0.0113
ETHNIC ORIGIN		1	.5294	-.2456	.1209	-0.0658
WAYNE COUNTY			1	-.1211	.1012	0.0033
FAMILY INCOME				1	.4960	0.2159
SIBLINGS IN COLLEGE					1	0.2523
ACT COMPOSITE						1
CORRELATION MATRIX						
YEAR = COMBINED 1991-1993		ETHNIC	WAYNE	FAMILY	SIBLINGS IN	ACT
	DEBT	ORIGIN	COUNTY	INCOME	COLLEGE	COMP
DEBT	1	.2709	.1715	-.0778	.0692	-0.0075
ETHNIC ORIGIN		1	.5076	-.1849	.1563	-0.0832
WAYNE COUNTY			1	-.0999	.0880	-0.0222
FAMILY INCOME				1	.4382	0.1958
SIBLINGS IN COLLEGE					1	0.2398
ACT COMPOSITE						1

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