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College Debt: An Exploratory Study of Risk Factors Among College Freshmen

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The goals of this study are to examine the relationships between loan knowledge, money management skills, debt tolerance attitudes, and student income potential to their willingness to incur educational debt at a mid-western university. The current study showed that freshmen students lacked personal and general loan knowledge and had unrealistic expectations of future income at graduation.

College student loan debt has become an increasing concern in recent years. The “Freshman Finance 101” survey conducted by Harris Interactive (2005) found that 80% of parents and 83% of students anticipate they will have debt as a result of college costs. Student and family college borrowers were examined and 68% of those surveyed considered student loans as necessary and a norm for most families, although a major financial hardship (The Education Resource Institute & The Institute for Higher Education Policy, 1995). Financial knowledge is low among high school students and college students (Avard & Manton, 2005; Chen & Volpe, 2002; Danes & Hira, 1987; Henry, Weber, & Yarbrough, 2001; Jumpstart Coalition for Financial Literacy, 2006) and students often do not understand their obligations as loan recipients. Combe (2002, p.44) points out, “Most students make their borrowing decisions as teenagers but will have to live with the consequences a decade later as adult wage earners.”

As debt levels have increased, studies have focused on the effects of debt on the college graduate. The primary concern has been on students’ abilities to repay their loans (Baum & Schwartz, 2006; Harrast, 2004; Hira, Anderson, & Peterson, 2000; King & Frishberg, 2001; Pinto & Mansfield, 2006). Students who are unable to manage large debt loads may default on loan payments ruining credit records.

Concerns have been raised that undergraduate debt prevents students from buying homes, having children, or moving out of their parents’ home after graduation. Hira et al. (2000) found students with extensive borrowing believed that the size of their loan repayments would affect many future decisions including the ability to purchase a car or home. About one-fourth of the students thought that the size of loan payments would affect their decision about having children. Taylor and Overbey (1999) found many students dream of owning their own home in the future, but the reality of credit card and student loan debt will seriously jeopardize the realization of this dream.

According to Baum and Schwartz (2006), one of the major goals of student loan programs is to allow college students to borrow in the anticipation of future income. But as they point out, student borrowing decisions are based on expected future income, and even well-informed decisions may not materialize. Students often change majors in college, sometimes from a higher expected paying field to a lower paying field. Unanticipated events may occur, such as a change in health or family situations that force a student to drop out; the job market may drop and the student finds himself making less than expected. Such events lead Baum and Schwartz (2006, p. 2) to conclude, “Investments in the postsecondary education are risky.”

Attitudes about debt have changed dramatically during the twentieth century—from a general dislike and distrust of debt to acceptance of credit as part of a modern consumer lifestyle (Lea, Webley, & Walker, 1995). Borrowing for a college education, once a limited practice for students and parents, is now the norm for most families. Parents, often themselves in debt, do not see educational debt as a major threat to their children. Students and their families have accepted borrowing to pay for college as another piece of their overall debt patterns. But what makes some students more willing to take on higher levels of debt than others? How do students decide how much student loan is affordable? Financial factors are cited as important in the decision-making process of college choice, but a better understanding of the college borrower is needed to understand the role of financing in the decision-making process. It is likely that borrowing will always be part of the picture for educational financing, but more research is needed to gain a better understanding of the student borrower and their decision-making process.

Purpose and Research Questions

The purpose of this study was to explore risk factors associated with educational debt and the effects of these risk factors on college freshmen’s willingness to incur educational debt. The primary goals of this study were to examine the relationships between loan knowledge, money management skills, debt tolerance attitudes, and student income potential to their willingness to incur educational debt. The following research questions are addressed:

1. Is there a relationship between loan knowledge and willingness to incur educational debt?
2. Is there a relationship between money management skills and willingness to incur educational debt?
3. Is there a relationship between debt-tolerant money attitudes and willingness to incur educational debt?
4. Are students who overestimate their future income more willing to incur debt than students who do not overestimate their future income?
5. Can loan knowledge, money management skills, and money attitudes predict the role of cost in the decision-making process in college choice?

Methodology

The data collection instrument was a questionnaire developed by the researchers to measure students' loan knowledge, money management skills, money attitudes to debt, and future income projections.

There were five sections to the survey: 1) specific loan knowledge, 2) general loan knowledge, 3) money management, 4) debt tolerance, and 5) career and college choice. Section I consisted of 18 questions relating specifically to loans and was designed to measure the student's loan knowledge on his/her own specific loans and general loan knowledge. The loan-specific questions were based on the research by King and Frishberg (2001) and the other sections were developed based on the literature review. Seven statements were presented to participants and they indicated "true" or "false." Examples of items in the general loan section included *"You must be attending school at least part-time to keep your loan payments deferred"* and *"An unsubsidized loan is awarded on financial need."* To measure the student's loan knowledge on his/her own specific loan, questions were asked that related to who filed the paperwork, type(s) of financial aid that they are receiving, type of loan – federal or private, expected amount of debt by graduation, total amount that they expect to pay, how long it will take to pay the loan back, and the expected monthly payment on the loan.

Five questions were used to assess the respondent's money management skills. The questions were created for this survey based on the literature review of Chen and Volpe (1998), Harris Interactive (2005), and Henry et al. (2001) and personal experience. The survey questions related to how often the respondent checked their bank balances, used a formal or informal budget, paid off their credit card each month, and overdrew their banking account. Chen and Volpe (1998) reported a Cronbach alpha score of .85 on their personal finance survey. Validity of their survey was based on the evaluation of the survey by two individuals knowledge on personal finance. Reliability of their survey was based on high Cronbach alpha scores.

The debt tolerance section consisted of 12 questions related to money attitudes on debt and was based on a scale developed by Davies and Lea (1995). The scale was designed to assess debt tolerance in college students. The items were scored on a 5-point scale ranging from 1 (strongly agree) to 5 (strongly disagree) and included statements such as: there is no excuse for borrowing money, you should always pay cash rather than charging, debt is an essential part of today's lifestyle, taking out a loan is a good thing because it allows you to enjoy life as a student, and owing money is basically wrong. Lower scores indicated a greater tolerance to debt. Davis and Lea (1995) reported Cronbach's alpha of 0.79 for reliability on their debt tolerance scale.

Three questions based on the research of King and Frishberg (2001) were included at the end of the survey that related to the choice of major and perceived earnings and respondent's college choice.

Reliability and Validity

Evidence of content validity for the survey was based on previous research by Davis and Lea (1995), Chen and Volpe (1998), Henry et al. (2001), Holland and Healy (1989), and King and Frishberg (2001). Validity was further tested with a pilot test of the survey with college students. The survey was initially tested for clarity with five college students from various colleges. The survey tool was refined using input from the students. The questionnaire was also reviewed by three Eastern Illinois University professors for validity purposes. The professors agreed the survey appeared to have face validity.

After the data was collected, Cronbach's alpha was calculated to determine the internal consistency for each of the sections in the survey. Cronbach's alpha was computed for each of the three sections on loan knowledge, money management skills, and debt tolerance. Cronbach's alpha was .40 for general loan knowledge, .42 for the money management skills section, and .48 for the debt tolerance section. The small sample size may account for the low Cronbach alpha scores in this study. Given the fact that the study and the measure were exploratory in nature, the low alpha scores were considered acceptable for the current research.

Population/Samples/Procedures for Data Collection

A convenience sample of college freshmen students enrolled in a mid-sized Midwestern university was used in the study. One hundred and forty-four freshmen students living in a pre-selected dormitory complex completed the survey. Upon approval from the Institutional Review Board, the survey was distributed on three afternoons through the start of dinner at the complex's main entrance. Candy was used as an incentive to get students over to the table to explain the survey. The researchers described the purpose of the survey, answered any questions pertaining to the survey, and then asked students to complete the survey. An informed consent form was given to each participant to sign and was filed separately from the survey. Students had the option to discontinue completing the survey at any time. To provide confidentiality, students were asked to place the completed survey in a group envelope.

Results

Of the 144 college freshman participating in the survey, 86 (59.7%) were female and 58 (40.3%) were male. The university has predominately White students and the racial/ethnic composition was reflective of the participants in the study.

Research Questions Descriptive Results

Means and standard deviations for the variables used to answer the research questions were calculated and are shown in Table 1. The general loan knowledge mean score was 4.22. The mean percentage of correct answers was 60.3%, indicating that on average the participants answered a little over half of the loan knowledge questions correctly.

Table 1: Means and Standard Deviations for Study Variables

Variable	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
General Loan Knowledge	133	2.00	7.00	4.22	1.08
Money Management Skills	129	5.00	43.00	9.77	4.14
Debt Tolerance	144	27.00	54.00	38.33	5.01

The mean score for money management skills was 9.77. The lower the score, the better money management skills the study participant possessed. The majority of the study participants possessed good money management skills. The debt tolerance mean score was 38.33. Lower scores indicate a greater tolerance to debt.

Average starting incomes were compared to the data from the university's Career Services 2007 Annual Report, State of Illinois Wage Data 2008 Report, and The National Association of Colleges and Employees 2007 Salary Survey. A score of "1" indicated the student unrealistically overestimated their potential salary and a score of "0" indicated the student estimated their potential income accurately or underestimated their income. Students who marked their major as undeclared were not included in the calculation.

An independent sample *t*-test was conducted to examine whether students who overestimated their future income were more willing to incur educational debt than students who did not overestimate their future income. The dependent variable in the test was students' willingness to incur debt and the independent variable in the test was the variable that indicated the overestimation or underestimation of future income. The independent sample *t*-test was not statistically significant, $t(122) = .74, p = .46$. This means that students who overestimated their future income were no more willing to incur debt than students who did not overestimate their income. Over half of the participants (50.4%) over-inflated their projected future earnings.

A logistic regression was used to determine if the independent variables (loan knowledge, money management skills, and debt tolerance) could predict the dependent variable (importance of cost in college choice). The dependent variable was assessed with survey question number 45 which asked if cost was important in the student's choice of college. A score of "1" was given to students who indicated cost was important and a score of "0" given to those students who indicated cost was not important in their choice of college.

Using the Hosmer and Lemeshow chi-square of goodness of fit test, the logistic regression model achieved an overall predictor rate of 69.2%. The Hosmer and Lemeshow test is the recommended test for overall fit of a logistic regression model and is considered more accurate than the traditional chi-square test. A finding of non-significance in the chi-square test

($p = .19$) indicated that the model adequately fit the data. Although the model theoretically fit the data, the independent variables were not significant, meaning that they did not predict the role of cost in the decision-making process in college choice for this sample. It appears, that, at least for the current sample, loan knowledge, money management skills, and debt tolerant attitudes did not affect the role of cost in students' decisions in college choice.

The current study also looked at how loan knowledge, money management skills, and debt tolerant attitudes predicted the role of cost in the decision-making process in participants' college choice. Findings revealed that loan knowledge, money management skills, and debt tolerant attitudes were not important predictors in the decision-making process in college choice (see Table 2).

Although no significant correlation was found between loan knowledge, money management skills, debt tolerance, perceived future income and willingness to incur educational debt, it should be of concern that students did not have a strong loan knowledge score and overestimated their perceived future income. Studies have shown that lack of loan knowledge and overestimating future income have been related to high student loan debt (Hira et al., 2000; King & Frishberg, 2001; Seaward & Kemp, 2000; Taylor & Overbey, 1999). The previous studies were conducted between 1999 and 2001; therefore, a difference in student attitudes towards debt a decade ago compared to the recent study could play a role in the contradiction in the findings. These student attitudes could be different based on a shift in parenting styles and the current economy.

Perna (2006) and King and Frishberg (2001) found many students are poorly informed about financial aid and do not understand the implications of educational borrowing. Marriott (2007) found significant gaps in students' basic understanding of the student loan system. In the present study students were not knowledgeable about their financial aid; students believed that they were poorly informed about their own personal student loans and student loans in general. Thirteen percent of the students did not know what type of financial aid they were receiving and of those students who indicated they were receiving some type of loan, 69.7% did

Table 2: Unstandardized and Standardized Coefficients for the Variables in the Logistic Regression Equation

Variables	<i>B</i>	Sig.	<i>Exp.(B)</i>
Debt tolerance	.004	.914	1.004
Money management	-.050	.488	.951
Loan knowledge	-.012	.947	.988
Constant	1.166	.572	3.210

not know what type of loan they had. The mean score for general loan knowledge was 4.22 which equates to a test score of a D. The current study was consistent with the research that says students lack educational loan knowledge. This lack of financial aid (loan) knowledge may be attributed to age as Holland and Healy (1989) concluded from their study. They concluded that students may not be concerned about debt management at this stage in their lives. However, as Eglin (1993) points out, it is this lack of financial knowledge and experience that can cause students to become over-indebted. Students need to be educated on loans, responsibilities, and obligations before entering college as well as throughout the college years; otherwise they may face hardships in the future because of their lack of understanding about their loan agreements.

One factor of responsible borrowing is the ability to estimate future income. In the current study over 50% of the students overestimated their future income upon graduation. Twenty-five percent of the students surveyed thought they would be making over \$50,000 at graduation. Students were also asked to estimate what they thought they would be making after five years. Over 65% thought they would be making over \$50,000 and 10% thought they would be making over \$100,000. Seaward and Kemp (2000) found students who estimated higher than average incomes after ten years in the workforce had larger student loans. Taylor and Overbey (1999) found students were accumulating debt with high expectations of future income. Students with unrealistic expectations of future income may be at risk for borrowing more than necessary and may have trouble repaying their loans later.

In past research, money management skills have been found to be poor among college students. Henry et al. (2001) believe students are living on the edge of a financial disaster because of their lack of money management skills. College students accumulating debt through student loans and credit cards may not have the financial knowledge to understand the future impact of this accumulating debt. A good money management plan includes budgeting and financial record keeping, but Henry et al. (2001) found only 42% of the students studied had a budget and none of them followed it all the time. However in this study, participants appeared to have good budgeting and record keeping skills. Over 80% of the current study's participants claimed to use a budget with 22% using a budget all the time. The study also found that the majority of participants indicated they knew how much money was in their checking accounts and checked their balances regularly. Seventy-five percent of the study participants stated they had never overdrawn their banking account. However, only five questions from the current study were associated with money management skills which may not have provided enough information to calculate an accurate money management skill score. It is also possible freshman students are still under the watchful eyes of their parents so budgeting and record keeping is controlled by the parents more than the student. Past studies have shown students with poor money management skills are more likely to accumulate larger amounts of debt (Henry et al., 2001; Marriott, 2007); thus making money management skills an important area for further study.

Earlier studies have indicated financial attitudes play a role in debt. Davies and Lea (1995) reported that higher levels of debt in college students were related to higher debt tolerance attitudes, but also that debt tolerance appeared to increase after students became indebted. The present study found students were neither strongly pro-tolerant nor anti-tolerant to debt. However, as Davies and Lea point out, the study participants' debt tolerance levels may increase as their debt increases. As with most freshmen, the study participants' overall debt amounts were relatively low at this time. In addition, the participants had the option of choosing "neither agree nor disagree" on the scale to determine debt tolerance and the majority of study participants chose "neither agree nor disagree" on 6 of the 12 statements. This may indicate freshman students have no defined attitudes on debt at this stage in their college career.

An unexpected relationship was discovered during an examination of the data from the survey. The researchers expected students who estimated above average total debt levels at graduation would also indicate they were more willing to incur student loan debt to attend college, but the opposite appeared to be happening. Students who estimated above average total debt levels at graduation also indicated that they were less willing to incur student loan debt to attend college. Correlation statistics were run between total estimated undergraduate debt and a student's willingness to incur debt. The relationship was found to be significant ($r = -.37, p = .00$). Students with higher estimated total undergraduate debt were less willing to incur student debt than students with lower estimated total undergraduate debt. This may indicate students do not want to incur debt, but they have to or perceive they have to in order to attend college. The reason for this relationship is unclear and warrants further investigation.

Since the findings disproved the assumption that a positive relationship exists between higher total undergraduate debt and willingness to incur student debt, additional correlation statistics were run to explore other explanations. The variable that indicated willingness to incur student debt was replaced with the variable that determined total estimated undergraduate debt. Correlation statistics were computed between the variable that determined total estimated undergraduate debt and the variables that indicated loan knowledge, money management skills, debt tolerance, and perceived future income. The relationship between loan knowledge and total estimated undergraduate debt approached significance ($r = .17, p = .052$). There appeared to be a relationship between loan knowledge and total estimated undergraduate debt. Students who had a low general loan knowledge score also indicated they would be graduating with above average loan debt. The correlation suggested that students with less knowledge about student loans estimated that they would graduate with higher than average total undergraduate debt. Their lack of knowledge about student loans may result in students graduating with above average student debt. No relationship was found to exist between the variables that indicated money management skills, debt tolerance, and perceived future income.

The present study did not find loan knowledge, money management skills, or debt tolerance predicted the role of cost in the decision-making process in college choice. Seventy percent of the students surveyed indicated cost was important in their choice of college, but loan knowledge, money management skills, and debt tolerance attitudes were not significant in the logistic regression that was conducted. Although the Hosmer and Lemeshow test indicated loan knowledge, money management skills, and debt tolerance can be used to predict the role of cost in the decision-making process in college choice, the small sample size from one college may not have provided enough statistical power to determine that these variables contributed to this decision.

The current study showed that freshmen students lacked personal and general loan knowledge and had unrealistic expectations of future income at graduation. Each can be a contributing factor in overall student loan debt and should be addressed. Understanding the student borrower is the first step in the development of programs to educate future students on debt prevention.

Recommendations

Few studies have focused on why some students are more willing to incur educational debt than other students. Continued research is needed to identify student risk-factors in the accumulation of student debt. Future research would be enhanced by including more freshmen from a larger number of universities, both public and private, as well as the exploration of other possible risk-factors that may also influence a student's willingness to incur debt. The utilization of interviews and focus groups would enhance a self-reported questionnaire and provide broader depth on the research topic. A longitudinal study design that followed students' educational borrowing throughout their college years would provide a more accurate assessment tool to identify the educational borrowing risk factors. In addition, a longitudinal study would offer researchers information on how maturation and experience affects students' educational borrowing and beliefs about borrowing.

The growing debt level among students graduating from college is a cause for alarm. High schools and colleges should take an active role in educating students on educational borrowing and debt prevention. Before entering college, students need to be better educated on their student loans as well as the responsibilities and obligations that come with borrowing. A policy recommendation would be to create debt prevention/education programs for high school students and their parents. Such a program would help students understand the risks of over-borrowing, teach students how to borrow responsibly, and provide students with alternatives to over-borrowing.

Post-secondary institutions also have a responsibility to help students make realistic borrowing decisions. Students are often so intent on attending the college of their choice that they lose all perspective on what it may cost financially. Colleges need to help students understand and cope with the financial implications of attending their institution. A policy recommendation is to provide on-going educational programs to college students

on responsible borrowing. Information that is student specific, such as previous loans, total amount borrowed, interest rate, grace period, repayment schedule, and monthly payments should be provided annually so that students understand what their responsibilities will be for loan repayment. In addition, students need to be counseled on what is an appropriate amount to borrow for their particular major.

Although increased education on responsible student borrowing is important, Congress must also play a role in reducing the burden of student debt. In order to help prevent students from going further into debt, Congress should make more grant aid available, institute flexible repayment plans based on majors and debt totals, and to fund financial and student loan education.

More research needs to be done. There are many questions yet to be answered pertaining to student awareness of the implications of high loan debt and student risk-factors that may affect total debt amounts. Understanding the student borrower and what makes one student borrow more than another is the first step in the development of programs to educate future students on debt prevention.

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