Loan Awarding Practices and Student Demographic Variables as Predictors of Law Student Borrowing

By Amanda A. Kastern

B.A. in Philosophy, Political Science, and Writing-intensive English, Marquette University
M.P.A. in Public Administration, Illinois Institute of Technology

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Dissertation directed by

Roger Whitaker
Professor of Higher Education and Sociology

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

The Graduate School of Education and Human Development of the George Washington University certifies that Amanda A. Kastern has passed the Final Examination for the degree of Doctor of Education as of December 4, 2014. This is the final and approved form of the dissertation.

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Amanda A. Kastern

Dissertation Research Committee

Roger Whitaker, Professor of Higher Education and Sociology, Dissertation Director

Lindsey Malcom-Piqueux, Assistant Professor of Higher Education Administration, Committee Member

Brandi Weiss, Assistant Professor of Educational Research, Committee Member

Dedication

This research is dedicated to my family. In particular, to my maternal grandmother, Berenice Schmidt, who would've celebrated her 93rd birthday on the day this work was defended. She was an early supporter of my academic endeavors, having lent me the money to take my first college-level course in philosophy at the University of Wisconsin-Madison when I was 16 years old. She continues to be remembered with the utmost love and gratitude. Also to my parents, Raymond and Mary Ellen Kastern, who have supported me in many ways throughout the years and who, like my grandmother, instilled in me an early appreciation for education.

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Abstract of Dissertation

Loan Awarding Practices and Student Demographic Variables
as Predictors of Law Student Borrowing

This study examined the effect of institutional loan awarding practices and student demographic characteristics on law student borrowing, in order to contribute to our understanding of student borrowing decisions. Behavioral economic concepts like framing and status quo bias suggest that decisions about borrowing may not be made using a rational cost-benefit analysis alone, as traditional economic theory suggests, but may also be influenced by the loan amount that an institution initially awards a student. The amount initially awarded represents the status quo, which, for a variety of possible reasons, the student may be inclined to accept, even if he is eligible to borrow more.

Using three years of student borrowing data from a law school, multiple regression analysis was performed to determine the effect of initial loan amount offered and 15 additional independent variables on loan amount borrowed. The law school data provided a unique opportunity to study student loan borrowing decisions because the institution followed two different loan awarding practices in the three academic years for which data was obtained. This provided a quasi-experimental environment in which to study the effect of initial loan amount awarded on loan amount borrowed.

Altogether, the model explained nearly half of the variance in loan amount borrowed and initial loan amount offered explained 5.4 percent of the variance in loan amount borrowed holding all other variables in the model constant. In addition to initial loan amount offered, the following variables were also found to be statistically significant predictors of loan amount borrowed: Asian race, age, being married, Expected Family

Contribution, cost of attendance, class level, student status, total credits, and total non-loan aid. It was also found that there was no statistically significant difference in the relation between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010, under the old awarding practice, as compared with 2010-2011, when a new awarding practice was in place. This suggests that students responded similarly to the initial loan amount offered, or the status quo amount, under both the old and new awarding practices.

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Chapter I: Introduction

In recent years, Americans have been relying heavily on student loans to pay for postsecondary education. In 2008-2009, student loans as a percentage of total student aid reached a peak of 49 percent (College Board, 2013b, p. 3). Though that has since dropped to 43 percent in 2012-2013, student loan borrowing remains high (College Board, 2013b, p. 3). During the 2012-2013 academic year, a total of $67.8 billion in federal student loans were disbursed to undergraduate students, which represented 37 percent of all undergraduate student aid (College Board, 2013b, p. 12). Graduate students, particularly those in professional programs such as law and medicine, are even more dependent on student loans, largely due to the fact that these students are not eligible for need-based federal grants, such as the Pell and Supplemental Educational Opportunity Grant (SEOG). In 2012-2013, federal loans of $33.7 billion comprised 63 percent of aid to graduate students (College Board, 2013b, p. 13).

This study was concerned with the borrowing behavior of law students, who, for a variety of reasons, are particularly reliant on student loans to finance their professional education, a matter which has been compounded in recent years by marked decreases in job prospects for law graduates. In the United States there are 202 American Bar Association-approved law schools, which enroll approximately 150,000 students (American Bar Association, 2013a, p. 8). For these students, pursuing legal education comes with a hefty price tag. In 2012, average tuition for in-state law students at public institutions was $23,214, while average tuition for out-of-state law students at public institutions was $36,202 (American Bar Association, 2014b). As one might expect, tuition was the highest at private law schools, at an average of $40,634 (American Bar

Association, 2014b). Given the high cost of law school tuition, as well as substantial indirect educational costs and the aforementioned lack of need-based federal grant aid, the amount that a typical law student borrows to finance her education may be staggering, but not particularly surprising. In 2011-2012, law students enrolled at public law schools borrowed an average of $84,600 to finance their legal education, while their counterparts at private institutions borrowed $122,158 on average (American Bar Association, 2014a).

Eligible law students receive federal student loans through a financial aid application process that starts when they complete the Free Application for Federal Student Aid (FAFSA). The information a student submits on her FAFSA allows the institution to determine her eligibility for several types of federal loans, which vary in their interest rates and other terms and conditions. Many elements of the financial aid application and awarding process are regulated by the federal government, but institutions have discretion in the amount of loans that are *packaged*, or presented to a student, usually on a paper or electronic award letter. The central hypothesis of this study was that the amount presented to the student in her loan package has an effect on the amount the student chooses to borrow. This hypothesis was supported by the psychological concept of framing, which behavioral economists have utilized to help understand economic decision-making. According to economists Thaler and Sunstein (2009), framing is "the idea that choices depend, in part, on the way in which problems are stated" (p. 36).

Using framing and other behavioral economic concepts as their basis, Sunstein and Thaler (2003) advocate for what they call *libertarian paternalism*—the idea that "it is both possible and desirable for private and public institutions to influence behavior while

also respecting freedom of choice" (p. 1159). They argue that small, seemingly insignificant details can have an impact on people's behavior, and so, when designing an environment in which an individual makes a decision, which they call *choice architecture*, there is no such thing as a neutral design (Thaler & Sunstein, 2009). Take for example, the way in which food is arranged in a cafeteria (Sunstein & Thaler, 2003; Thaler & Sunstein, 2009). The food that is placed at eye level is more likely to be purchased than items that are placed above eye level or at the end of the line. The manager of the cafeteria who makes the decisions about where food items are placed is acting as a choice architect, perhaps without even realizing it. He has the power to influence the types and amounts of food that individuals purchase and consume. Thaler and Sunstein (2009) argue that in many situations, such as the cafeteria example, it is impossible to avoid influencing people's choices, and therefore, choice architecture should be designed in such a way as to make people better off.

According to the concept of choice architecture, law schools act as choice architects when they design the loan packages that are presented to law students. Though many law school administrators may not fully appreciate their role as choice architects, there are postsecondary institutions that have attempted to influence student borrowing behavior through thoughtful design of student loan packages. One such institution is a law school that was the focus of this study, hereinafter referred to as Midsize Law School. In an effort to reduce student borrowing, Midsize Law School formerly limited the amount of costlier loans that were initially offered to students, even though they may have been eligible for higher loan amounts. By presenting a student's financial aid award package in this way, the institution attempted to *nudge* the student toward better

borrowing behavior by carefully constructing the environment in which the student made a choice about the loan amount to borrow. Better borrowing behavior does not necessarily mean borrowing less, since there are situations in which a student may be well-advised to borrow more. However, by offering a lower amount and requiring students to request an increase if they wanted to borrow more, Midsize Law School encouraged students to make more conscious borrowing choices, rather than relying on the default option.

With choice architecture and other behavioral economic concepts in mind, it stands to reason that the financial aid awarding practices of institutions acting as choice architects may influence the amount that law students borrow. In addition, the literature suggested that demographic characteristics of students also influence the amount borrowed. The purpose of this study was to determine, using secondary data and quantitative methods of data analysis, whether institutional awarding practices and other variables had an effect on the amount that law students borrowed.

During the three-year period from 2008-2009 through 2010-2011, Midsize Law School, a private, non-profit law school with a diverse student body, shifted from the type of loan awarding practice described above, where the amount of more costly loans were limited in a student's initial award package, to including a student's full loan eligibility on his initial award. Given these two facts, the shift in loan awarding practice and the demographic diversity of its student body, Midsize Law School provided a unique opportunity to study law student borrowing behavior. Using comprehensive student data from 2008-2009 through 2010-2011, this study examined Midsize Law School's institutional awarding practices in order to answer the following research questions:

1. To what extent do an institution's financial aid awarding practices and student demographics predict the loan amount that law students borrow?
    a. What percent of variance in loan amount borrowed is explained by the overall model?
    b. Which variables are significant predictors of loan amount borrowed while controlling for relations among other predictors in the overall model?
    c. Does initial loan amount offered explain a significant percent of variance in loan amount borrowed above what is explained by the other predictors in the overall model?
    d. Is there a significant difference in the relationship between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010 as compared to 2010-2011, given the change in loan awarding practices?
    e. What percent of variance in loan amount borrowed is explained by initial loan amount offered, student status, and the interaction between initial loan amount offered and student status?
    f. What percent of variance in loan amount borrowed is explained by initial loan amount offered, class level, and the interaction between initial loan amount offered and class level?

Context and Significance of the Project

Law student loan debt today.

In recent years newspapers and other media outlets have regularly featured stories about the issue of increasing student loan debt, often profiling students who have struggled to repay their loans. The majority of these stories have focused on undergraduate students, and for good reason. Undergraduates comprise the largest proportion of students pursuing postsecondary education, and in recent years they have been borrowing student loans at much higher rates than in the past. In 2011-2012, 57 percent of graduates from public colleges borrowed an average of $25,000 in student loans, while 65 percent of their counterparts at private nonprofit colleges borrowed an average of $29,900 (College Board, 2013b, p. 21). Sometimes these news stories profiled a graduate from a private college or university who borrowed more than $200,000 in student loans over the course of his education. Often these sensational stories suggested anecdotally that large student loan debt burdens were having an impact on borrowers' life choices, such as whether to attend graduate school, whether to buy a house, or when to get married.

Though stories about law students struggling to repay their student loans are not featured in the news quite so often, concerns about the trend of increased student loan debt and the lifelong burden of such high debt are no more real than for law students. There are several reasons why law students are particularly likely, even more so than most other graduate and professional students, to borrow large amounts of student loans. First, in addition to being ineligible for federal grants, full-time law students are discouraged from working, particularly during the first year of law school. In fact, an American Bar Association accreditation standard states that "a student may not be employed more than 20 hours per week in any week in which the student is enrolled in

more than twelve class hours" (American Bar Association, 2013b, p. 24). This increases the indirect cost of a legal education, and often leads to increased borrowing. Unless a full-time law student is being supported by his family or aid from another source, he must borrow to pay not only for tuition, fees, and books, but also for his living expenses. Graduate students and professional students in some other fields are often able to work at least part-time while enrolled, and may in fact hold a paid position as a teaching or research assistant, for example, in conjunction with their studies. The salary or stipend associated with even part-time employment helps to defray their direct and indirect educational costs and lessens the need to borrow.

Rising tuition costs have also had a greater impact on law students than other professional students. According to the U.S. Government Accountability Office (2009), between 1995-1996 and 2007-2008 law school tuition and fees increased by 7.2 percent annually for in-state students at public institutions, 4.8 percent annually for out-of-state students at public institutions, and 3.8 percent annually at private institutions (p. 16). This compares to 5.3 percent, 4.1 percent, and 2.4 percent respectively for medical students at the same types of institutions (U.S. Government Accountability Office, 2009, p. 16). Since these figures were examined by the U.S. Government Accountability Office in 2009, law school tuition has continued to rise at rates of 4 to 10 percent each year at public schools and 4 to 5 percent each year at private schools.

While tuition has steadily increased, the amount of lower-interest, subsidized federal loans that law students may borrow has not. As a result, the percentage of law schools whose tuition can be fully funded through Stafford loans has decreased substantially over time. In 1994-1995 the annual Stafford loan limits were sufficient to

cover in-state tuition at 100 percent of public institutions and out-of-state tuition at 97.4 percent of public schools (U.S. Government Accountability Office, 2009, p. 38). These annual limits even covered tuition at 80.4 percent of private institutions in 1994-1995 (U.S. Government Accountability Office, 2009, p. 38). By 2007-2008, those figures decreased to 10.7 percent of private schools and out-of-state tuition and in-state tuition at 22.2 percent and 80.2 percent of public institutions, respectively (U.S. Government Accountability Office, 2009, p. 38). When law students are unable to cover their tuition costs, let alone their fees, books, and other expenses with Stafford loans, they often turn to more costly student loans, such as the Graduate PLUS loan or private loans, to finance their education. These loans lack an interest subsidy and usually have higher interest rates, resulting in higher total borrowing costs.

Finally, law students are more limited than students in many health professions in the amount of lower cost loans they can borrow. Students in medicine, pharmacy, dentistry, podiatry and even veterinary medicine, are eligible to borrow between $12,500 and $20,000 in additional unsubsidized Stafford Loans through the course of a nine-month academic year, over and above the annual maximum of $12,000 for most graduate students (Federal Student Aid, 2011). These students are thereby able to substitute unsubsidized Stafford Loans, at an annual interest of 6.21 percent and disbursement fee of about 1.1 percent, for Graduate PLUS Loans, which today have an annual interest rate of 7.21 percent plus a disbursement fee of approximately 4.3 percent, thus borrowing money at a lower cost and potentially saving thousands of dollars over the course of a 10-, 20- or even 30-year repayment period (Federal Student Aid, 2014a, p. 2).

Given the large amount of loans law students routinely borrow, the prospect of entering repayment on one's student loans must be daunting for many new law graduates. To make matters worse, the recent economic downturn has made job prospects for new lawyers particularly grim. A report on the job placement of 2013 law graduates found that 86.4 percent of graduates were employed or pursuing another degree, but of those who were employed, 8.1 percent were in short-term positions and 8.4 percent were working part-time (NALP, 2014, p. 1). Of the graduating class of 2013, 64.4 percent were working in positions where bar passage was required and another 13.8 percent were working in a position where a juris doctorate was preferred (NALP, 2014, p. 2). That leaves a substantial proportion of graduates who are unemployed or underemployed and may find it particularly difficult to repay their student loans.

For those law graduates who are fortunate to find a full-time job in the legal profession, salaries in public interest law, which includes positions at government and non-profit organizations, have not kept pace with salaries in the private sector, especially at large firms. Of those 2013 law graduates who were employed, 69.5 percent were employed in the private sector at an average annual salary of $97,179, while 30.3 percent were employed in the public sector at an average annual salary of $52,102 (NALP, 2014). This discrepancy between salaries in the public and private legal employment sectors has been widening over time. Over the ten-year period from 1991 to 2001, median annual salaries in the private sector increased by 80 percent while salaries in public interest and government increased by 37 percent (Equal Justice Works, NALP, and the Partnership for Public Service, 2002, p. 14). The relatively low salaries in the public sector mean that law graduates in these jobs may be more likely to have difficulty repaying their student

loans. There is also a fear among some in the legal community and society at large that the increasing student loan burden of law graduates and the substantial discrepancy in salaries are leading some talented graduates who may have had an interest in working in the public sector to pursue jobs in the private sector. The results of empirical research regarding this issue are mixed, but such a trend, if one does exist, may damage this country's justice system, which is predicated on the assumption that adequate legal representation is available to all regardless of financial means. All of these factors paint a daunting picture for society and for law students and recent law graduates, many of whom will feel the burden of heavy student loan debt for many years, even decades, to come.

The historical rise in student loan debt.

Since the inception of the first government-sponsored student loan program in 1958, the dramatic rise in student loan debt can be attributed to several direct and indirect factors. While it is not necessary to recount the entire history of federal student aid in the United States in order to explore these factors, a brief description of the Higher Education Act (HEA) provides some insight into the foundation of nearly all federal student aid programs and the mechanism through which they have evolved over time.

Many scholars consider the Higher Education Act of 1965 (HEA '65) to be the beginning of the federal student aid system that exists today, due in large part to the fact that it created the first federal student aid program with the explicit purpose of equalizing college opportunities for needy students (Gladieux & Hauptman, 1996). The cornerstone of HEA '65, the Educational Opportunity Grant (EOG), was a program that provided grants for financially needy undergraduate students (Gladieux & Hauptman, 1996; Hearn,

1998). The Guaranteed Student Loan (GSL) program, which was also created by HEA '65, was intended as a small, supplementary program to provide loans to students who were not needy enough to qualify for other need-based programs (Hearn, 1998). These and other programs were authorized under Title IV of HEA, which is why today federal student aid programs are often referred to as Title IV aid programs. Reauthorization of HEA by Congress is required every five years, and since 1965 there have been nine reauthorizations. These reauthorizations, along with other pieces of federal legislation, have resulted in new student loan programs and changes to existing programs, some of which have led to increases in student loan debt over time.

Direct causes.

The creation of new student loan programs under Title IV of HEA is one of several direct causes of increased student loan debt. For many years the National Direct Student Loan (NDSL), which was created by the National Defense Education Act of 1958 and later renamed the Perkins Loan, and GSL were the only two federal loan programs available to students. Not until 1980, by which time the number of borrowers in the GSL program had grown to 2.9 million, did the reauthorization of the Higher Education Act (HEA '80) create a new kind of loan available to parents of undergraduate students called the PLUS loan (Hearn, 1998, p. 62). Though the PLUS loan provides no interest subsidy while the student is in school and had a higher rate than the GSL program, it is open to all undergraduate students regardless of need and it allows for larger loan amounts (Hearn, 1998). At the time it was created the PLUS loan had no immediate impact on law or other graduate and professional students, since they were ineligible to receive it, but it is important in the history of graduate student aid because it

is the predecessor of the Graduate PLUS loan. Not until the 1986 reauthorization of HEA (HEA '86) was the first loan program designed specifically for graduate, professional, and independent students created—the Supplemental Loan to Students (SLS) (Hearn, 1998). By the end of the 1980s the GSL program had been renamed the Stafford Loan program in honor of Senator Robert Stafford, which is the name it still bears today (Hannah, 1996).

By 1990 there were 3.9 million borrowers in the Stafford Loan program and the 1992 reauthorization of HEA (HEA '92) created yet another new loan program (Hearn, 1998, p. 66). By this time the Higher Education Act, with all of its reauthorizations and amendments, accounted for 74 percent of all aid to postsecondary students and loan programs constituted the largest component of all disbursements under HEA. (Hannah, 1996, p. 500). The growth of Title IV loan programs continued under HEA '92 when it made all students eligible for Stafford loans by creating a new unsubsidized Stafford loan that is non-need based, essentially replacing the SLS program, which was phased out in 1994-1995 (Hannah, 1996; Hearn, 1998). The dramatic expansion in federal student loan borrowing made possible by HEA '92 can be seen in comparing the number of borrowers before and after this legislation was enacted. In 1990-1991 there were 3.7 million Stafford loan borrowers (Hearn, 1998, p. 68). By 1994-1995 that number had increased to 6.2 million (Hearn, 1998, p. 68).

The Higher Education Reconciliation Act of 2005 (HERA) further expanded student loan eligibility by allowing graduate and professional students to borrow PLUS loans (Stroup & Shaw, 2006). These relatively new Graduate/Professional PLUS loans carry the same terms as PLUS loans for parents, except the student borrows the loan on

his own behalf. Starting on July 1, 2006, this allowed many graduate and professional students to borrow the Graduate PLUS loan, which has an unsubsidized, fixed interest rate, in lieu of costly alternative loans, also known as private loans. Still, it is important to note that the Graduate PLUS loan, like most of the loan programs that were created after 1965, is more costly than earlier subsidized loan programs like NDSL and GSL, due to a lack of interest subsidy and a higher interest rate. Therefore, while the total amount of student loan debt has increased as the number of loan programs have grown, so too has the cost to the student for every dollar borrowed.

Another direct cause of increased student loan debt, especially in recent years, is the increase in annual and aggregate student loan limits. For example, in addition to creating the Graduate PLUS Loan program, which has no annual or aggregate limit, HERA also increased annual combined subsidized/unsubsidized Stafford loan limits from $2,625 to $3,500 for first-year undergraduate students and from $3,500 to $4,500 for second-year undergraduate students (Stroup & Shaw, 2006). The additional unsubsidized annual loan limit for graduate students was also increased from $10,000 to $12,000 and it was increased from $5,000 to $7,000 for students who already obtained a baccalaureate degree and enrolled in coursework necessary to prepare for enrollment in a graduate or professional degree (Stroup & Shaw, 2006). The aptly-named Ensuring Continued Access to Student Loans Act of 2008 (ECASLA) continued the trend of increasing loan limits, though for undergraduates only this time around (Sampson, 2008).

The increased cost of higher education is cited most often as the direct cause for the increase in student loan debt. Increases in law school tuition, which, depending on the type of institution, ranged from an average annual increase of 3.8 percent to 7.2

percent over the 12-year period from 1995-1996 to 2007-2008, have been higher than the increases in tuition and fees at undergraduate institutions over the past decade, which receive far greater attention in the news media (U.S. Government Accountability Office, 2009). What is particularly interesting about the increases in higher education costs, both at law schools and undergraduate institutions, is that the increases at private nonprofit institutions have been much lower than at state-supported public institutions. For example, when adjusted for inflation, the average annual increase in tuition and fees at four-year private nonprofit institutions during the ten-year period from 2003-2004 to 2013-2014 was 2.3 percent, compared to 4.2 percent at four-year public institutions (College Board, 2013a, p. 14). In addition, over the past 30 years the average annual increase at private nonprofit schools has been trending down, while the same cannot be said of public institutions. During the ten-year period from 1983-1984 to 1993-1994 the average annual increase at private nonprofit schools was 4.1 percent, which was much higher than the increase over the decade from 2003-2004 to 2013-2014, while the increase at public schools during this same period was consistent with the past decade at 4.3 percent (College Board, 2013a, p. 14). This trend can be explained by the decrease in state funding for public institutions of higher education that has been occurring over the past several years.

Indirect causes.

Through its role in increasing the cost to students at public postsecondary institutions, the decline in state appropriations for higher education in relative terms can be considered an indirect cause of increased student debt. Even before the recent economic downturn, state budgets across the country were being squeezed, and

appropriations to state colleges and universities have often been a popular target for cuts. By 2005 state funding for higher education had fallen to its lowest level in two decades (U.S. Department of Education, 2006). Since then, the decrease in public appropriations for state institutions has become even more dramatic. In the five-year period from 2008-2009 to 2012-2013, state funding on a per student basis fell 27 percent from $9,911 (in 2012 dollars) to $6,646 (College Board, 2013a, p. 24). Reduced funding for public colleges and universities results in more of the cost of higher education being passed on to students through higher tuition and fees. Dramatic evidence of this trend was seen in California in 2010, where budget cuts led to a 32-percent increase in fees and sparked student protests at all University of California campuses (Wollan & Lewin, 2009). Many students feel they have no choice but to finance their increasingly unaffordable public higher education with student loans, thereby resulting in higher individual and total student loan debt. This trend has an impact on law students and the amounts they borrow while in law school, since 42 percent law schools accredited by the American Bar Association are public institutions. In addition, law students who attended public schools for their undergraduate education may enter law school with higher levels of undergraduate debt due to this reality of decreasing public support for higher education.

A relative decrease in state and federal funding for need-based financial aid has also indirectly contributed to the rise in student loan debt. Due to rising college costs and annual Pell grant increases that have not kept up with inflation, "in 1986 the average Pell grant covered 98 percent of average tuition at public four-year colleges; in 1999 it covered just 57 percent" (Bowen, Kurzweil, & Tobin, 2006, p. 200). Similar relative decreases can be seen in many state funded need-based grant programs. The less grant

aid needy students are eligible to receive, the more they may need to borrow in order to pay for tuition and other expenses. This isn't likely to have an impact on most law students while they are in law school, since all federal and most need-based state grant programs are exclusively available to undergraduate students, but again it means that some may enter law school with higher levels of undergraduate debt.

Many scholars and observers attribute relative decreases in funding for need-based grant aid to a shift toward student aid programs that benefit the middle class. This is evident in the creation and continued support of merit-based state scholarship programs like the Georgia HOPE Scholarship, for example. This particular program is funded by proceeds from the state lottery and provides scholarships to students with a high school GPA above 3.0, regardless of financial need (Bowen et al., 2006). In actuality scholarships are more often awarded to students from higher-income families, many of whom would not have been likely to borrow student loans had they not received the scholarship. Lower-income students are less likely to receive the scholarship. That fact, in combination with their higher financial need, means they are presumably more likely to borrow to finance their education. This contributes to higher total student loan debt.

The creation and continued expansion of student aid programs that benefit students from families with higher incomes, in lieu of increasing support for need-based programs, can be attributed, in part, to a political process where middle-class families wield considerable influence over elected officials. These programs are popular with the middle class, who make up a large portion of the electorate. There is little doubt that politicians' desire to appeal to these voters has played a role in the expansion of eligibility for federal loans to students from higher income families. This was

particularly evident with the passage of HEA '92. In addition to creating the non-need-based unsubsidized Stafford loan, HEA '92 created a single federal need analysis methodology, referred to as the Federal Methodology (FM), by which eligibility for any need-based Title IV financial aid was to be determined (Gladieux & Hauptman, 1996). According to Gladieux and Hauptman (1996) this resulted in a "dramatic reduction in expected family and student contributions" (p. 19) thereby making more middle-income families eligible for federal aid, particularly student loans. All of these policy changes were a boon to middle-class families, so much so that Representative William D. Ford, who was the chair of the Subcommittee on Postsecondary Education, released a statement listing the legislation's benefits for the middle class (Hannah, 1996).

Another underlying cause of the relative decline in funding for need-based grant programs and public financial support of higher education in general, which in turn has resulted in increased student loan debt, is the notion that higher education is primarily a private good rather than a public one. The view of higher education as a private good holds that individuals are the primary beneficiaries of higher education through increased earnings throughout their lifetimes (Heller & Rogers, 2006). This increase in earnings, as compared to those who enter the labor market with only a high school diploma, is often referred to as the college wage premium (Heller & Rogers, 2006). Empirical evidence illustrates the dramatic difference in the earning potential of bachelor's degree recipients as compared with that of high school graduates. For example, over her lifetime, a bachelor's degree recipient earns about 66 percent more during a 40-year career than a high school graduate (Baum, Ma, & Payea, 2010, p. 12). Some argue that given this premium, which has risen steeply since 1980, individuals should also be the ones to bear

the cost of higher education. This view has influenced public policy regarding appropriations for higher education over the past several decades, driving public funding down as the perception of higher education as a private good has grown (Heller & Rogers, 2006; Labi, 2003).

Ironically, in addition to convincing the public that since the benefit of higher education is primarily felt by the individual so too the cost should be primarily borne by the individual, the increase in the college wage premium has also likely contributed to the willingness of students to borrow loans to finance their education. Human capital theory helps to explain this willingness. According to Becker (1993) higher education is an investment in human capital because it is one of many activities that "influence future monetary and psychic income by increasing the resources in people" (p. 11). By pursuing higher education, an individual is improving his knowledge, skills, and other intangible resources, which usually results in higher income throughout one's life, as demonstrated by the aforementioned college wage premium. Prospective students know this, and many are therefore willing to invest in higher education, even if they must borrow against those future earnings through student loans. One may reasonably extrapolate, then, that as the college wage premium has increased, a greater number of students have been willing to borrow student loans to finance their higher education, thereby contributing to the rise in total student loan debt. However, it is important to note that willingness to borrow in order to pay for higher education is not consistent across all racial/ethnic groups and socioeconomic backgrounds. Empirical evidence, which will be explored in chapter 2, has shown that students from underrepresented minority groups

and those from lower-income families are less willing to borrow, and as a consequence may choose not to pursue higher education.

Student Loan Borrowing Decisions

Though human capital theory is helpful in explaining why students are willing to borrow loans to finance postsecondary education, it is not particularly helpful in explaining how students determine the amount they will borrow. This study was based on the premise that the amount of student loans an institution chooses to offer to a student in his financial aid award package ultimately influences the amount that student borrows. This premise is supported by Thaler and Sunstein's (2009) concept of choice architecture, which, along with other behavioral economic concepts, served as the conceptual framework for this study. The idea that the design of the environment in which a decision is made influences decision-making is supported by the psychological and behavioral economic concepts of bounded rationality, framing, and status quo bias.

Bounded rationality is the idea that, contrary to conventional economic theories of consumer behavior, people do not always make rational decisions. In other words, economic models expect people to carefully consider all available information, weighing present and future costs and benefits and their own preferences, in order to select the option that will make them better off in the long term. Bounded rationality is the notion that, quite often, people do not make decisions in this way. Instead, their decision-making processes are subject to fallacies and biases. One such bias is status quo bias, which Thaler and Sunstein (2009) describe as "the tendency to go along with the status quo or default option" (p. 8). This status quo bias, or inertia, helps to explain the popularity of free trial subscriptions as a marketing tool, for example. The publisher that

offers a magazine subscription on a free trial basis knows that many people who accept the free trial will not cancel it within the specified time period and become paying subscribers simply as a result of inertia.

Not only does the status quo bias exist in situations where there is so little at stake, as in the case of a free trial magazine subscription, but substantial evidence suggests that it also comes into play in situations where there is a great deal at stake. For example, research regarding 401(k) retirement savings plans suggests that inertia prevents many employees from enrolling in these plans. Madrian and Shea (2001) found that when new employees were automatically enrolled in a company's 401(k) retirement savings plan, such that they had to opt-out rather than opt-in to the plan, 90 percent enrolled immediately and 98 percent enrolled within 36 months. This compares to an enrollment rate of 20 percent after three months and 65 percent after 36 months when they were required to opt-in in order to participate. When one considers the benefits of 401(k) participation, including the company match and the tax advantages of this type of savings vehicle, it is difficult to argue that such a large percentage of employees who chose not to opt-in were making a rational decision.

The following scenario involving loan awarding practices at two different graduate schools suggests that decisions regarding student loan borrowing are another high-stakes situation where individuals may fall victim to status quo bias. Despite the fact that the primary sources of aid at both institutions were the same three types of federal loans, institutional loan packaging practices and anecdotal student borrowing behavior differed substantially between the two schools, one of which was private, non-profit law school and the other a for-profit medical and veterinary school.

At the medical and veterinary school, all students who were eligibile according to federal regulations were automatically awarded the maximum in federal student loans, that is the full cost of attendance less any other sources of aid. Using a sample cost of attendance of $40,500, this might have amounted $20,500 in an Unsubsidized Stafford Loan and $20,000 in a Graduate PLUS Loan, for example. Anecdotal oberservations from financial aid administrators at this school suggested that students usually applied for these full amounts.

In the past the law school, in an effort to minimize the amount students borrowed, awarded the maximum amount in Stafford Loans, assuming the student was eligible, and then a Graduate PLUS Loan equivalent to the average PLUS Loan amount borrowed by students the previous year. Using the same $40,500 cost of attendance as an example, this might give a student the following award package: $20,500 in an Unsubsidized Stafford Loan and $15,000 in a Graduate PLUS Loan. The student's total award was $35,500, which was $5,000 less than the cost of attendance. A student with this award would have been eligble to borrow $5,000 more than she was awarded, but the law school required that the student contact a financial aid counselor to request that increased amount. Anecdotal observations at this school suggested that because students had to take additional action to borrow more many students simply borrowed the amount offered, thereby resulting in lower indebtedness.

There is very little existing research regarding the decision-making process that students use when determining how to finance postsecondary education, and none that considers whether status quo bias or choice architecture play a role in decisions about student loan borrowing. Prior research in the area of student loans and borrowing has

more often considered topics like student perceptions of educational debt (e.g., Baum & O'Malley, 2003) and the demographics of students who borrow (e.g., Baum & Steele, 2010). Researchers have also investigated whether the borrowing of student loans has an effect on student outcomes (e.g., Kim & Otts, 2010), students' plans to attend graduate or professional school (e.g., Millett, 2003), or graduates' career choices (e.g., Chambers, 1992), particularly in fields like law or medicine where there are often wide discrepancies in pay depending on the specialty or career path chosen.

Prior qualitative research conducted by Porter, Fossey, Davis, Burnett, Stuhlmann, and Suchy (2006) has suggested that students perceive counseling and other financial aid office efforts to be important in making good college funding decisions, but there is no quantitative data to demonstrate the effect of institutional financial aid policies and practices on student borrowing, which is one of the crucial components of students' college funding decisions. This study addressed this gap in the literature and the issue of increased student loan borrowing by determining whether loan awarding practices designed to minimize student borrowing were successful in doing so. Rather than relying on qualitative data, this study analyzed a secondary dataset using multiple regression to determine the effect of student demographic variables and the use of particular institutional awarding practices on law student borrowing.

Organization of the Dissertation

This dissertation consists of five chapters, including this introduction. Chapter two presents a review of the literature regarding student loan borrowing decisions, the effects of student loan debt, and institutional policies and practices related to the administration of financial aid. Chapter two also includes a review of the literature

related to the theoretical and conceptual frameworks for this study. Chapter three presents the research design, including a description of the measures used and the methods of data collection, preparation, management, and analysis, as well as descriptive statistics of the sample. Chapter four presents the findings of the study and chapter five consists of a discussion of those findings, implications for practice, and areas for future research.

Chapter II: Review of the Literature

This study explored the problem of increased levels of law student loan borrowing by examining institutional loan awarding practices and law student demographics to determine the extent to which they predict the loan amount that law students borrow. This study tested the hypothesis that there is a positive relationship between the initial loan amount offered and the total amount borrowed. This hypothesis was grounded in a conceptual framework based in behavioral economics. Behavioral economic concepts like bounded rationality, choice architecture, framing, and status quo bias have been developed based on evidence that consumers often do not act rationally, as conventional economic theories expect them to. Applied in the context of this study, the behavioral economic concept of status quo bias, for example, which describes the tendency of decision-makers to choose the status quo or default option, supported the expectation that when students are initially offered higher loan amounts, the total amount borrowed will also be higher, since the initial amount offered represents the default option.

This chapter will first explore human capital theory, since it has served as a theoretical framework for most of the existing research related to student loan borrowing. However, it will be argued that human capital theory is an insufficient theoretical framework for understanding the amount that students choose to borrow to attend law school. Therefore, a conceptual framework grounded in the behavioral economic concepts of bounded rationality, choice architecture, framing, and status quo bias will be presented as an alternative framework for understanding student loan borrowing decisions.

Existing empirical research regarding student loans will also be explored. This includes empirical evidence regarding student decision-making, which has identified some of the factors that are important to students in making decisions regarding the financing of higher education. For the purposes of this study, the literature related to student loan borrowing decisions was divided along the two major types of decisions that students make: whether to borrow, which is often referred to as willingness to borrow, and the amount to borrow. Though this study was primarily concerned with decision-making regarding the amount borrowed, literature regarding willingness to borrow will also be examined, since this body of literature helps to explain why this study may find differences in total amount borrowed among law students according to their race/ethnicity and other demographic variables. Prior literature on the cost versus convenience debate, which pertains to the causes of increased student borrowing, will also be considered. By examining borrowing behavior in response to institutional awarding practices, this study fills a gap in the literature and contributes to that scholarly debate.

Research regarding the relationship between student loan debt and various student outcomes will also be reviewed. This is an area of research related to student loans that has been explored in considerable depth and breadth. Some of this research suggests negative outcomes of student loan debt, thereby reinforcing the significance of this study's research problem and the importance of institutional strategies to reduce student borrowing. Finally, research regarding institutional financial aid awarding practices will be explored, in order to demonstrate the extent to which they may vary from institution to institution.

Student Loan Borrowing Decisions

As many parents of high school seniors can attest, the decision-making process about whether and where to enroll in college can be daunting. One popular conceptual model for examining college choice "draws on an economic model of human capital investment as well as the sociological concepts of habitus, cultural and social capital, and organizational context" (Perna, 2006, p. 116). Perna's (2006) model is grounded in human capital theory, which suggests that the pursuit of higher education is an investment in human capital, because it is one of many activities that "influence future monetary and psychic income by increasing the resources in people" (Becker, 1993, p. 11). However, unlike other models that assume that college-choice decisions are made using a rational decision-making process that involves a calculation of the costs and benefits of higher education, Perna's (2006) model also takes into account the "situated context" in which those decisions are made. Perna's (2006) model proposes that college-choice decisions are made within four contextual layers: "(1) the individual's habitus; (2) school and community context; (3) the higher education context; and (4) the broader social, economic, and policy context" (p. 116). In other words, Perna's (2006) model contends that even though an individual may undertake a rational decision-making process that involves weighing the short- and long-term costs and benefits of enrolling in college, her decision-making process can't help but be influenced these layers of context.

For most students who decide to enroll in postsecondary education, whether at the undergraduate or graduate level, deciding how to pay for one's education is a necessary part of the process, and one that may involve decisions about whether to borrow student loans and if so, the amount to borrow. Like earlier models of college choice, much of the

existing research about student loan borrowing decisions has been grounded in human capital theory, which is explored in greater detail in this chapter. This study was based on an alternative conceptual framework for understanding student loan borrowing decisions that took into account some of contexts outlined in Perna's (2006) college choice model. In particular the conceptual framework for this study drew upon behavioral economic concepts, which will also be explored in this chapter, for help in understanding student loan borrowing decisions, particularly decisions about the amount to borrow.

Human capital theory.

Much of the existing empirical research literature on the subject of student loan borrowing is grounded in human capital theory. Human capital theory assumes that an individual is expected to see a long-term return on his investment in higher education, despite the short-term direct and indirect costs, due to increased wages throughout his or her lifetime, among other benefits. The increase in wages that a typical college graduate earns above and beyond the wages earned by a typical high school graduate is often referred to as the college wage premium. Empirical evidence has long demonstrated the existence of the college wage premium. For example, Baum, Ma, and Payea (2010) found that in 2008, median earnings of bachelor's degree recipients were $21,900 more than the median earnings of high school graduates (p. 11) and over her lifetime, a bachelor's degree recipient earns about 66 percent more during a 40-year career than a high school graduate (p. 12). The college wage premium is substantial even after factoring in the direct and indirect costs of higher education. According to Baum et al. (2010) "the typical four-year college graduate who enrolled at age 18 has earned enough

by age 33 to compensate for being out of the labor force for four years, and for borrowing the full amount required to pay tuition and fees without any grant assistance (p. 13). Furthermore, the college wage premium has been increasing over time. Evidence examined by Autor (2010) shows a steady increase in the college wage premium since the early 1980s, even after taking race and years of work experience into consideration. The wage premium enjoyed by professional degree recipients, including law graduates, is even more substantial. In 2008, the median earnings of professional degree recipients was $100,000, which was $66,200 more than the median earnings of high school graduates (Baum et al., 2010, p. 11).

Human capital theory and the existence of the college wage premium help to explain why many students choose to enroll in undergraduate and graduate education, even if they must finance the cost of their higher education using student loans. The assumption, as Perna (2008) succinctly describes it, is that "students make decisions about higher education based on a comparison of the perceived costs and benefits" (p. 591). Even though the interest charges associated with borrowing increase the cost of education for students who finance their higher education with student loans, many students perceive that the overall benefits of higher education will still outweigh the costs. Given the college wage premium and the near universal availability of federal student loans, one might wonder why every student doesn't enroll in some form of higher education. Though there may be a variety of reasons that some individuals forego higher education, there is empirical evidence, which is explored later in this chapter, that suggests that despite the availability of student loans, some students and their families

may be unwilling to borrow to pay for college, and as a result may forgo higher education.

Conceptual framework.

Human capital theory suggests that an individual's decision to pursue postsecondary education, which is an investment in human capital, is a rational response to "a calculus of expected costs and benefits" (Becker, 1993, p. 17). This calculation of costs and benefits is not limited to purely financial considerations. Individuals are expected to weigh their preferences to determine non-financial costs and benefits, which is often referred to as the maximization of satisfaction or utility. Rabin (1998) provides the following definition of the rational utility-maximizing behavior that individuals are assumed to exhibit by conventional economic models:

> Economics has conventionally assumed that each individual has stable and coherent preferences, and that she maximizes those preferences. Given a set of options and probabilistic beliefs, a person is assumed to maximize the expected value of a utility function… (p. 11)

Put in the context of a prospective student deciding whether to enroll in law school using student loans as a sole funding source, for example, a rational prospective student is assumed to weigh the direct and indirect educational costs, including the opportunity cost of lost wages while enrolled and the deferred cost of interest that will accrue on the student loans, the likely return on the investment by way of increased wages throughout her lifetime, her own preference to earn a J.D. degree, and other non-financial preferences, such as the social benefits of holding an advanced degree. In understanding conventional economic theories that are based on the assumption of rational behavior, it

is important to note that "the utility obtained from education and all other goods is *unique* to each person" (DesJardins & Toutkoushian, 2005). In other words, one student's preference to earn a J.D. is likely to be different than that of any other student who is also considering enrolling in law school.

There are three ways in which human capital theory, as a conventional economic theory, is an insufficient theoretical framework for understanding the amount that students choose to borrow to attend law school. First, human capital theory is helpful in explaining why students choose to enroll in law school even if they must finance their education with student loans, though even in this regard it has its weaknesses (see DesJardins & Toutkoushian, 2005), but less helpful in explaining why they choose a specific amount to borrow. Though Becker (1993) does not expound on this topic, a basic understanding of conventional economic theory would suggest that students act rationally in choosing to borrow the amount that maximizes their utility, weighing, for example, the immediate benefit of a certain standard of living with the long-term cost of repaying student loans. The loan awarding practices of many law schools seemed to be designed based on this assumption as well. Often students are awarded the maximum loan amount they are eligible to receive and it is assumed that they will spend an appropriate amount of time and energy weighing their options, ultimately deciding to borrow an amount that is optimized for their individual circumstances. However, given that student preferences and all but the most direct costs and benefits cannot be adequately measured by researchers, and may vary substantially by student, conventional economic theory is not particularly helpful in understanding how students make these decisions. Oftentimes, researchers simply assume after the fact that the student has made

this rational calculation and that the chosen amount borrowed, or other student outcome, is the option that best maximized the student's expected utility.

Another objection to using conventional economic theory, such as human capital theory, as a framework for understanding decisions regarding the amounts law students borrow, is the argument that students do not possess perfect knowledge in weighing the costs and benefits of student loan borrowing. For example, it is impossible for a prospective law student to precisely predict his future income if he chooses to attend a particular law school. However, rationality does not assume that individuals have perfect knowledge of the expected costs and benefits of the options. In other words,

> It is not necessary that a student have perfect information regarding the future income streams from different institutions in order to make a rational decision. All that is required is that the person be able to form estimates of these income streams and act in a manner that is consistent with their calculations and preferences. (DesJardins & Toutkoushian, 2005, p. 218)

Empirical evidence examined by Choy and Li (2006) reinforces the difficulty in estimating the benefits of higher education, particularly future income, on an individual basis. They examined student income and loan repayment data approximately 10 years after the students in the sample graduated from college and found that students with high incomes immediately after graduation were not necessarily those with the highest incomes 10 years later (Choy & Li, 2006). Choy and Li (2006) suggest that "this highlights the fact that when students and their families must make the decision to borrow, it is difficult for them to predict the actual burden of the debt" (p. viii).

Difficulty in estimating the long-term costs associated with borrowing federal student loans has been compounded in recent years by programs designed to help alleviate heavy student loan debt burdens. The federal government now offers several "income-driven" repayment plans, including income-based repayment, income-contingent repayment, and the Pay As You Earn plan, all of which involve payments that are based on a certain percentage of an individual's monthly discretionary income (Federal Student Aid, 2014b). They are designed to alleviate the debt burden of individuals who may have otherwise had to dedicate a substantial portion of their monthly income to student loan repayment. There are also federal loan forgiveness programs for teachers and other who work full-time in public service jobs. While these programs have the potential to reduce the long-term borrowing costs of students who earn relatively low wages and/or have high debt levels by reducing the total amount repaid, they make it even more difficult for students to make accurate estimates of the costs and benefits of borrowing loans to finance one's education. Not all student borrowers will be eligible for these programs, and for the ones who are the amount to eventually be repaid would be impossible to calculate at the outset of one's education, due to uncertain future earnings. As a result, a student who may eventually benefit from such programs may make decisions about whether to enroll in higher education, and whether and how much to borrow, based on an inflated estimate of the long-term costs of borrowing, since the real, lower cost is impossible to estimate with any fidelity.

While a lack of perfect information does not preclude rational behavior on the part of the decision-maker, it is again problematic for the researcher who wants to study the amounts that law students choose to borrow. If even the student does not have perfect

information, there is little hope that a researcher would be able to accurately estimate the costs, benefits, and preferences facing each student.

The final objection to the sole use of human capital theory in understanding the amounts students borrow, and the one that points to a more appropriate conceptual framework for this study, is based on substantial evidence that students, and consumers in general, do not behave rationally when making choices. This evidence supports the concept of *bounded rationality*, which is the idea that preferences are not always consistent or well-defined and people "often resort to intuitive reasoning based on 'rules of thumb' to save time and energy in making assessments" rather than performing the utility calculations assumed by conventional economic theory (Jabbar, 2011). Bounded rationality, as well as other behavioral economic concepts including *framing*, *status quo bias*, and *choice architecture*, provide the conceptual framework for this study.

Bounded rationality.

The concept of bounded rationality refutes the notion that humans act rationally in making decisions. Behavioral economists reject the ubiquity of Chicago man, named for the Chicago school of economics, who is assumed to conform to the "standard economic model of perception, preference, and process rationality" (McFadden, 1999, p. 76). McFadden (1999) and many others have argued that this model is false, citing "overwhelming behavioral evidence against a literal interpretation of Chicago man as a universal model of choice behavior" (p. 76). The concept of bounded rationality is concerned not with the assumption of immutable preferences, but rather the rationality of the decision-making process itself. This behavioral economic concept is supported by evidence that decision-makers use "heuristics that can fail to maximize preferences, and

are too sensitive to context and process to satisfy rationality postulates formulated in terms of outcomes" (McFadden, 1999, p. 79). Evidence to support this statement shows that decision-makers often make systematic errors in maximizing preferences. In particular, they struggle in making rational decisions when "there is a mismatch between cost and benefits in terms of time, saliency or scale" (McFadden, 1999. p. 82). For example, if a consumer is faced with two options, one that has a small cost and immediate benefit and another that has a larger cost but also a larger long-term benefit, it can be very difficult for the consumer to accurately estimate those costs and benefits and weigh her preferences to ultimately maximize utility.

Choice architecture.

Evidence that decision-makers are sensitive to context and process in ways that can undermine rational decision-making underpins Thaler and Sunstein's (2009) concept of *choice architecture*. Choice architecture is the idea that the way in which choices are structured and presented to the decision-maker influences his decision in such a way that may invalidate the conventional economic theory of rationality or utility maximization. According to Thaler and Sunstein (2009) a choice architect is a person or organization who "has responsibility for organizing the context in which people make decisions" (p. 3). For example, the grocer who decides which products to place near the cash register and the order in which they are arranged is acting as a choice architect. She suspects, and probably has evidence to prove, that she can increase sales of certain items if they are placed near the checkout line. Similarly, the hypothesis of this study suggested that law schools act as choice architects when they design the loan packages that are presented to law students. Whether he realizes it or not, the financial aid administrator who decides

the amount of the Graduate PLUS Loan that is initially included on a law student's financial aid award may be influencing the amount the student ultimately chooses to borrow.

One may find it easy to understand how choice architecture can influence a relatively minor decision, such as whether to buy a candy bar that is placed in the checkout lane at the grocery store, but when it comes to major decisions that will have a long-term impact on one's finances, such as the amount of student loans to borrow, it may be more difficult to believe that choice architecture really makes a difference. Evidence suggests that it does. Take, for example, decisions that individuals make about enrolling in a 401(k) retirement plan, which can have long-ranging ramifications for future financial well-being. Madrian and Shea (2001) found that when new employees were automatically enrolled in the company's 401(k) retirement savings plan, such that they had to opt-out rather than opt-in to the plan, 90 percent enrolled immediately and 98 percent enrolled within 36 months. This compares to an enrollment rate of 20 percent after three months and 65 percent after 36 months when they were required to opt-in to participate. If employees have immutable preferences about enrolling in a 401(k) plan that can't be influenced by the options they are provided, such as whether to opt-in or opt-out, then the participation rate should have been the same no matter the enrollment scheme. This evidence suggests that choice architecture matters, even when the stakes are quite high. There are at least two biases or effects that behavioral economists have identified that help to explain why choice architecture may make a difference for students who are deciding the amount of student loans to borrow. They are framing and status quo bias.

Framing.

Framing, which is sometimes called *framing effects*, refers to the idea that the way in which problems or choices are stated influence decision-making (Thaler & Sunstein, 2009). Thaler and Sunstein (2009) provide the hypothetical example of a doctor who is describing the risks of a particular surgical operation to patients. If the doctor phrases the risks in terms of probability of survival, such as 90 percent survive through five years, he may find very different results than if he phrases the risks in terms of probability of death, such as 10 percent do not survive through five years. Conventional economic theory suggests that patients would weigh the risks, as well as their own preferences, and come to the same conclusion regardless of how the risks are phrased, since they are mathematically equivalent. However, empirical evidence has shown that patients and even doctors make different choices depending on how treatment risks are stated, confirming the existence of framing effects in the process of making medical treatment decisions (e.g., Tversky & Kahneman, 1986).

Framing may play a role in the decisions law student make when determining the student loan amount they will borrow. Consider a student who has maximum Graduate PLUS Loan eligibility of $20,000, for example. The law school may choose to initially offer the student the full amount, with the understanding that he may borrow any amount from $0 to $20,000. Or, the school may choose to initially offer $15,000, again with the understanding that the student may choose between $0 and $20,000. The student's options are the same, but they have been presented in two different ways. Conventional economic theory would suggest that the student will borrow the same amount regardless of the initial loan amount offered, since he would have undertaken a rational process of

weighing his preferences, costs, and benefits in order to maximize utility. If one suspects that framing effects may play a role in the decision-making process, then, consistent with the hypothesis of this study, it is probable that the student would make different decisions in each scenario depending on the amount of the initial loan offer.

Status quo bias.

Status quo bias is another behavioral economic concept that may play a role in the decision-making process of law students who are choosing the amount of student loans to borrow. Status quo bias suggests that "people tend to prefer the status quo, even when more attractive options are available" (Jabbar, 2011). Samuelson and Zeckhauser (1988) developed the term to explain evidence that individuals "disproportionately stick with the status quo" or choose the default option (p. 7). Status quo bias helps to explain many consumer behaviors, like brand allegiance, for example. A consumer who has been buying Tide laundry detergent for 10 years is likely to continue buying Tide in the future. There are many possible reasons why individuals choose to retain the status quo. Samuelson and Zeckhauser (1988) cite "convenience, habit or inertia, policy (company or government) or custom" as just a few examples (p. 10). Sunstein and Thaler (2003) argue that decision-makers sometimes choose a default option because they think that it represents what most people often choose, or what informed people choose. They may even assume that the person or organization that has chosen to present a particular option as the default option is informed and had a good reason for presenting that option as the default.

Status quo bias may play a role in the decisions law student make when determining the amount of student loans they will borrow. This may be particularly true

for first-year students, especially those who are new to the area where the law school they are attending is located and may not be familiar with the cost of living. For example, imagine a first-year law student from rural Wisconsin who has been accepted to a law school in San Francisco. If that student has no experience living in a city, particularly one with a high cost of living like San Francisco, she may rely on the expertise of financial aid administrators at the school in determining the amount to borrow. If she receives a loan package that includes a $20,000 Graduate PLUS Loan she may borrow that full amount, under the assumption that it was offered to her because the financial aid office knows how much money she will need to go to school and live in San Francisco.

Empirical evidence.

The following exploration of existing empirical evidence regarding student loan borrowing decisions will provide support for the argument that human capital theory is insufficient for understanding student loan borrowing decisions and illustrate the gap in the literature that this study addressed. For the purposes of this study, the literature related to student loan borrowing decisions was divided along the two major types of decisions that students make: 1) whether to borrow, which is often referred to as willingness to borrow, and 2) the amount to borrow.

Willingness to borrow.

It was expected that this study would find significant differences in student borrowing according to race/ethnicity. Research findings regarding students' willingness to borrow in order to pay for higher education provide support for this expectation. Several studies have found that students from lower-income families and underrepresented minorities perceive of student loans as a riskier proposition than White

students and students from higher-income families, who seem more assured that their investment in higher education will pay off in the long term. These differences in perception, as well as mixed evidence as to whether students and their families really engage in an analysis of the costs and benefits of higher education, again highlight the inadequacy of using human capital theory to explain student loan borrowing decisions.

Over the past two decades the funding of postsecondary education in the United Kingdom has seen a shift similar to that of the United States, which was described in chapter 1. A system of means-tested grants has largely been replaced by a system of loans, which students must repay on an income-contingent basis (Christie & Munro, 2003). This shift has led to a body of research in the U.K. regarding the willingness of students to borrow in order to examine the argument "that loans are most likely to deter poorer groups from participating in higher education, as low-income families have not 'progressed' to the middle-class acceptance of debt as a way of life" (Christie & Munro, 2003, p. 622). This statement captures the concern that a funding system dominated by student loans is counteracting efforts to widen participation in higher education.

An early qualitative study by Archer and Hutchings (2000) examined the perceptions of 109 working-class Londoners who were not participating in higher education at the time the study was conducted to analyze the factors underpinning working-class non-participation in higher education. Archer and Hutchings (2000) found that most study respondents cited the benefits of higher education in personal terms, such as securing a better job, and some constructed the benefits of having a degree as "an almost mythical ticket to social mobility and the good life" (p. 565). Despite the perceived benefits, none of the respondents were participating in higher education at the

time, and their comments regarding the cost of higher education indicate that the financial risks, especially related to borrowing, may have been a primary factor in the decision not to participate. For example, respondents suggested that "poorer students are more likely to fail because they are pre-occupied with their financial situation, spending more time 'thinking about paying back loans'" (Archer & Hutchings, 2000, p. 562). Some respondents viewed loans as long-terms risks that might jeopardize their future lifestyle and stability, especially given the uncertainty of the job market (Archer & Hutchings, 2000). Based on their interviews with working class non-participants in higher education, Archer and Hutchings (2000) conclude that "a 'fear of debt' discourse is prevalent among working-class groups" and suggest that student loans may deter working-class students from pursuing higher education.

A quantitative study by Callender and Jackson (2005) provides additional evidence that students from low-income families are debt averse, and are more likely than their peers from higher income families to be deterred from participating in higher education because of a fear of debt. Using data from a survey of nearly 2,000 prospective undergraduate students, Callender and Jackson (2005) sought to systematically examine the impact of debt on access to higher education by measuring attitudes toward debt and determining the relationship between those attitudes and application to college. They found that the lower-income group in the study was more debt averse than the other groups, even after controlling for a variety of factors, including type of secondary school attended, gender, ethnicity, and age (Callender and Jackson, 2005). Callender and Jackson (2005) also found that debt aversion was a deterrent to applying to college, with the most debt-tolerant individual in the sample being five times more likely to apply than

the most debt-averse individual, even after controlling for other explanatory variables. They conclude that some students are not convinced by the argument, based on human capital theory, that student loans are a long-term investment in their future with minimal risks associated (Callender & Jackson, 2005).

Similar research in the United States has focused on willingness to borrow and perceptions of debt among low-income students and students of color. Trent, Lee, and Owens-Nicholson (2006) examined debt tolerance among underrepresented minority students considering future enrollment in graduate school. In a survey, study participants were asked "How likely are you to attend graduate school full-time with student loans only?" and were given three options for responding: *not at all likely, somewhat likely, or very likely to borrow* (Trent, Lee, & Owens-Nicholson, 2006). Using indices designed to measure locus of control, which refers to "where individuals perceive their power to affect change to be situated" (Trent et al., 2006, p. 1741), they found that "those most likely to borrow score higher on externality when compared with those least likely to borrow" (Trent et al., 2006, p. 1754). In other words, those students who were most likely to borrow were also more likely to attribute success to luck, chance, fate, or the control of others (i.e., external locus of control), as opposed to one's own actions, behavior, or characteristics (i.e., internal locus of control). Trent et al. (2006) acknowledge several limitations of their study, including the small sample size, an imbalance in race and sex, and a self-selection bias given the nature of the sponsored program from which participants were selected, but insist that their finding regarding the role of attribution in debt tolerance is significant. This finding suggests that, among

students of color, debt tolerance is influenced by "an individuals' assignment of responsibility for the outcomes he or she experiences" (Trent et al., 2006, p. 1740).

A more recent qualitative study by Perna (2008) examined high school students' perceptions of student loans, how parents and school staff shape those perceptions, other forces that shape those perceptions, and how those perceptions vary across schools. Consistent with the findings of Archer and Hutchings (2000) and Callender and Jackson (2005), Perna (2008) found that most students from low-resource schools, defined as having below average student achievement and socioeconomic status, viewed loans as 'risky' and their comments suggested concern about repaying loans as the primary reason for their reluctance to borrow. Parents of these students generally did not want their children to borrow loans for college (Perna, 2008). In contrast, Perna (2008) found that most students in the middle- and high-resource schools were willing to borrow and believed that the benefits of borrowing would exceed the costs. Correspondingly, parents of these students expected that their children would borrow to pay for college (Perna, 2008). Overall, Perna (2008) noted "the congruence between students' and parents' views" regarding loans and that "many students and parents form perceptions of loans using the benefit-cost comparison predicted by human capital theory" (p. 601).

Perna's (2008) conclusion that many students and parents utilize a cost-benefit framework when forming perceptions about student loans, contradicts the findings of Christie and Munro (2003) who sought to determine "the extent to which students are engaged in a process of rational weighing-up of the costs and benefits of higher education" (p. 621). Christie and Munro (2003) cited one debt-averse student as saying of her more debt-tolerant peers: "a lot of students don't think about the consequences of

student loans when they take them out" (p. 630). Overall, they found that none of the participants in their qualitative study "had taken a well-informed or carefully weighed decision about the balance between the costs and benefits of higher education before they started" (Christie & Munro, 2003, p. 633). However, it is important to note that Christie and Munro (2003) studied British university students, and their sample of 49 students included some who were classified as upper-class and admitted to borrowing loans in order to supplement their lifestyle while in college. This may account, in part, for the divergent findings of Perna (2008) and Christie and Munro (2003). Christie and Munro's (2003) findings regarding the perceptions of lower-class students were consistent, however, with prior research. Like Perna (2008), Callender and Jackson (2005), and Archer and Hutchings (2000), they found that students from less affluent backgrounds were more likely to perceive student loan borrowing as risky,

Though there is mixed evidence regarding the extent to which students consider the costs and benefits when determining whether to borrow student loans, the bulk of the evidence regarding students' willingness to borrow to pay for higher education does support the idea that students from lower-income families are more debt averse and are more likely to perceive student loan debt as a risky proposition. This finding, that perceptions of the costs and benefits of higher education differ according to socioeconomic status, reinforces the argument that human capital theory alone is not a sufficient framework for understanding student loan borrowing decisions and raises a legitimate concern about whether the current dominance of student loans in the funding structure of American higher education is having a negative impact on equality of access, both at the undergraduate and graduate levels. No prospective student has perfect

knowledge of the costs and benefits of higher education, but it appears that students from higher-income families are more willing to incur the risks inherent in pursuing higher education, even if they must borrow student loans to do so, and are therefore more likely to reap the benefits.

Amount borrowed.

Predictors of borrowing.

Several studies have examined large datasets in order to determine predictors of borrowing, particularly borrowing at the highest levels. Baum and Steele (2010) analyzed the demographic data of students who graduated with baccalaureate degrees during the 2007-2008 academic year and borrowed more than $30,500 in education debt, placing them in the 75th percentile of all graduates who completed their degrees with debt. Baum and Steele (2010) primarily utilized data from the National Postsecondary Student Aid Study (NPSAS) of 2007-2008. They found that independent undergraduate students were more likely than dependent undergraduate students to borrow high levels of debt, and that family income was not closely correlated to debt levels for dependent students (Baum & Steele, 2010). They also found that students who enrolled in for-profit institutions and Black students were more likely to borrow at the highest level (Baum & Steele, 2010).

Three earlier studies (Thomas, 2000; Harrast, 2004; Price, 2004) that examined similar predictor variables had the advantage of obtaining earnings data for borrowers in the dataset, which allowed them to use debt level, that is, the ratio of monthly student loan payment to monthly income, as a dependent variable, in addition to or in lieu of dollar amount borrowed. The advantage of using debt level as a dependent variable is

that it better captures affordability given the relative nature of money and debt. For example, the ability of two college graduates who each have a monthly student loan payment of $250 to repay their loans may vary substantially. The graduate whose monthly income is $5,000 will spend 5 percent of his income on his student loan payment whereas the graduate whose monthly income is $2,500 will spend 10 percent of her income to repay her student loan. Given that 8 percent is often cited as the threshold for determining whether a student's debt burden is manageable (e.g., Harrast, 2004; Heller, 2001), the former graduate's debt would be considered manageable while the latter's would be considered unmanageable.

Thomas (2000) found that while the amount borrowed by students in different degree programs did not vary substantially, debt level varied significantly, in large part due to the disparities in income across programs. For example, the debt to annual earnings ratio for humanities majors was 0.6215 compared to 0.4296 for engineering majors, even though the average amount borrowed was comparable at $10,483 and $10,675 respectively. Thomas (2000) also found that men had significantly lower debt levels than their female counterparts, again as a result of wage disparities. Women had starting salaries that were 6.6 percent lower than men, and debt ratios that were 17.5 percent higher on average (Thomas, 2000, p. 295). Another interesting, but perhaps not surprising finding was that borrowers from private colleges had debt ratios that were 57 percent higher than those from public colleges (Thomas, 2000, p. 305). More surprising was Thomas's (2000) finding that while graduates of selective institutions earned slightly more, there was no impact on the debt ratios of these students. Thomas's (2000) study was unique in that it factored in institutional level variables such as selectivity and type

of control (i.e., public or private) using a statistical method called hierarchical linear modeling. This allowed for a rigorous analysis of the contribution of student-level and institutional-level variables to the model. However, the dataset Thomas (2000) used is now quite outdated, especially considering the dramatic increases in student loan borrowing since HEA '92.

Price (2004) used the same sample as Thomas (2000), though Price's dataset included a second follow-up with the 1992-1993 graduates in 1997, which allowed Price (2004) to determine debt level several years after graduation. Price (2004) hypothesized that "educational debt burden varies across race, gender, and income groups after controlling for level of educational attainment, undergraduate and graduate field of study, and occupation" (p. 706). Using loan debt and income data from 1997, Price (2004) placed each graduate in one of three categories: (1) educational debt level greater than 8 percent; (2) educational debt level less than 8 percent but greater than zero; and (3) educational debt level that was greater than zero at the time of first follow-up, but declined to zero. Price (2004) acknowledged that since the dataset excluded student loans in deferment from the measure of monthly educational debt payments, educational debt burden may have been underestimated.

Contrary to findings from Thomas's (2000) research using an earlier version of the same dataset, Price (2004) found that race had a significant effect on educational debt burden. "Compared with Whites, Blacks had 1.5 times greater risk and Hispanics had 1.8 times greater risk to have excessive educational debt burden" (Price, 2004, p. 718). The effect of family income was also statistically significant. Graduates from low-income families had 7.2 times greater risk than upper-income graduates to have excessive

educational debt burden (Price, 2004, p. 718). Price (2004) also found that graduates employed in legal occupations had 2.2 times greater risk of excessive educational debt burden (p. 718) and those who a attained a master's or first professional degree by 1997 had 2.5 times greater risk of debt burden above 8 percent than graduates with only a bachelor's degree (p. 719). In examining graduates with high debt burden, Price (2004) found that "low-income and low-middle-income students had high debt burden because of lower salaries, while upper-middle-income students had high debt burden because of more borrowing" (p. 720). Finally, another interesting finding suggests that high debt burden was a more widespread problem than generally acknowledged, even for graduates who borrowed loans before changes in HEA '92 spurred dramatic increases in borrowing. Price (2004) found that 21 percent of graduates had excessive educational debt burden in 1997, more than four years after receiving their bachelor's degrees.

Harrast (2004) combined student academic and financial aid data from a large public university with earnings data from a state unemployment agency to determine which students borrowed most and which students were likely to have difficulty repaying their loans based on their earnings for the first three years after graduation. Harrast (2004) found significant differences in borrowing across majors and, not surprisingly, that the number of semesters to graduation is a significant predictor of higher levels of loan debt. Harrast (2004) confirmed Price's (2004) finding that there is a sizable minority of students who will have difficulty repaying their loans, particularly students in certain majors, such as sociology, which rank very high in loan debt and very low in earnings.

Though somewhat outdated, Chambers's (1992) study of the burden of educational loans on law students is important existing research because it is the only study that previously examined academic or demographic predictors of borrowing amongst law students. Chambers (1992) found that there was a substantial minority of students who were likely to face difficulty in repaying their loans. Black and Latino students, as well as students with low law school grades, were more likely to belong to this group. The present study provides a much-needed update to Chambers's (1992) findings by utilizing a more recent dataset and a greater array of independent variables, which allowed for a more sophisticated statistical model, to determine statistically significant predictors of law student borrowing.

In three studies of different populations, Baum and Steele (2010), Chambers (1992), and Price (2004) found that race was a significant predictor of high levels of student debt. Human capital theory and empirical research regarding willingness to borrow suggest why race may be significant. Findings from Trent et al. (2006) suggest that students from underrepresented racial minority groups often perceive the costs and benefits of higher education differently than White students, and may forgo the pursuit of higher education as a result. This finding is supported by human capital theory and is not surprising given the history of racial inequality in the U.S. If Black and Latino students perceive of the benefits of higher education as being relatively small due to their first-hand observations of racial inequality, it is only rational that they may determine that the benefits do not outweigh the costs. This may result in many potential Black and Latino student loan borrowers self-selecting out of the population by choosing not to enroll, thereby leading to disproportionately higher borrowing among Black and Latino students

who do choose to enroll. Black and Latino students who choose to enroll may perceive that the benefits of higher education are substantial, and may be willing to borrow large amounts as a result.

Continued inequality provides another explanation for higher debt levels among minority students. As Price (2004) noted, Black and Latino students in his study were more likely than White students to have excessive debt levels ten years after graduating from college. These excessive debt levels were not necessarily due to higher loan amounts, but rather were more often due to lower wages, thereby resulting in higher debt to income ratios. These lower wages may be the a result of overt discrimination (e.g., paying Latino teachers lower wages than White teachers in the same or similar positions) and/or the result of differences in the distribution of lower- and higher-paying jobs by race, with a higher percentage of White college graduates occupying higher-paying professions. Whatever the cause, the reality of lower wages for college-educated minorities has a dual effect. It contributes to the continued perception among minority students of higher education being a risky proposition, since they are not likely to reap the same financial benefits as college-educated White students, and it means that minority students are more likely to spend a larger proportion of their wages repaying student loans.

Though the empirical evidence regarding the effect of race on student loan borrowing is mixed, it does suggest that the context in which students from different racial/ethnic groups make student loan borrowing decisions are different. Goldrick-Rab, Harris, and Trostel (2009) argue that there may be significant variations in expected returns, time horizon, work preferences, imperfect information, and other "moderating

influences" according to socioeconomic status and race/ethnicity, which should be explored in order to better understand the relationship between financial aid and college success. Goldrick-Rab et al. (2009) contend that too often researchers have acknowledged the complex nature of the effects of aid on outcomes but have chosen to label certain findings as being due to "intangible" or "unobservable" factors, instead of exploring them further. Goldrick-Rab et al. (2009) call for "serious and more rigorous testing" and argue that the "possibility of additional and more powerful explanations must be explored" using theories and concepts borrowed from other branches of the social sciences (p. 15-16). Though the present study is not concerned with the effect of aid on student outcomes, it did seek to do just that by exploring the effect of loan awarding practices and student demographic characteristics on loan amounts borrowed by utilizing concepts borrowed from behavioral economics.

Role of counseling in student borrowing decisions.

A limited body of research has examined factors that affect student decision-making with respect to paying for college. Though findings from two qualitative studies have suggested the importance of counseling in college funding choices, including whether to borrow loans and what amount to borrow, none has quantitatively explored the role of initial loan amount offered in predicting amount borrowed.

Though their study dealt more generally with students' decisions regarding paying for college, findings from Porter et al. (2006) are worth considering because they suggest the importance of counseling in influencing student borrowing decisions. Porter et al. (2006) contend that the problem of students making poor college funding choices can be seen in the steady increase in student loan borrowing. They cited prior research in the

area of college funding decisions, but noted that "few studies have explored this issue directly from the viewpoint of students with an emphasis on prevention" (Porter et al., 2006, p. 25). Porter et al. (2006) attempted to address this gap in the literature by answering the following research question: "What factors do students perceive help them to make good college funding decisions?" (p. 27).

Porter et al. (2006) used a simple research design in gathering data to address this question. They asked participants to answer the following question in writing:

> What additions/changes would you suggest in financial aid counseling practices to help students make good financial decisions about paying for their college education? Feel free to cite personal experiences (Porter et al., 2006, p. 27).

They surveyed approximately 1,200 students at a research university in the Southeastern United States and received a total of 335 responses (Porter et al., 2006). The participants appeared to be a mix of financial aid recipients, some of whom were loan borrowers, and others who did not receive financial aid. After coding and analyzing the responses, Porter et al. (2006) found that

> Overall, respondents appeared to feel that better information would result in better counseling, more scholarship opportunities, better use of student loans, better use of credit cards, more decisions to work while in college, and more options for non-residents (p. 31).

Categorization of the responses also showed that counseling practices were most frequently cited as being important in making good college funding decisions (Porter et al., 2006).

While findings from Porter et al. (2006) validate the importance of counseling in making financial decisions about paying for college, there are several flaws in their research design and methodology that undermine the findings of the study. For example, Porter et al. (2006) included students who were not financial aid recipients in the sample and did not indicate whether participants were all undergraduates or a mixture of undergraduates and graduates. Given the different funding options that are available to undergraduates and graduates, and a variety of other differences between the two student types, it would have been helpful for the reader to know this fact when interpreting the results of the study. The data collection method also has some limitations that Porter et al. (2006) did not address. By asking participants to respond to the question in writing, the authors did not have the opportunity to ask follow-up questions for purposes of clarification or to explore a response on a deeper level. For example, one participant responded, "I need help with debt management" (Porter et al., 2006, p. 30). Using a semi-structured interview as the data collection method would have allowed the authors to ask the student to explain what kind of help would be most useful to her, which may have elicited a response that would have been more germane to the research question. This ability to ask follow-up questions is an advantage of semi-structured interviews and may have been helpful in collecting richer data for analysis. Conversely, an advantage of using a written response format is that it does allow students to provide honest, open responses in ways that they otherwise might not, since their anonymity is assured.

Finally, the way the question was worded may have predisposed participants to answer it in a certain way. After categorizing the written responses, Porter et al. (2006) found that counseling practices were the most often cited in helping students make good

funding decisions. This is not surprising given that the question asked students what changes they would suggest in counseling practices. The possibility exists that including this term in the question itself biased the students to respond in a certain way, thereby jeopardizing the credibility of the data and subsequent conclusions.

Nevertheless, the importance of counseling is reiterated by Perna (2008) in her study regarding student's willingness to borrow. Perna (2008) found that "differences in students' perceptions of loans reflect differences in the messages students receive about loans from their parents, school counselors, and teachers, and the broader state policy context" (p. 601). At the high school level, few counselors at the high-resource schools reported that they talked to students about loans, while counselors and teachers at low- and middle-resource schools often sent the message that loans are necessary. At low-resource schools, more teachers stressed the notion that repaying loans is a long-term obligation. Though Perna (2008) does not purport that her study demonstrates causation, it is interesting to note that the messages being sent by school teachers and counselors vary according to school resource level, as do students' and parents' perceptions regarding borrowing.

McDonough and Calderone's (2006) findings are similar to those of Perna (2008) and bolster the case for developing a deeper understanding of the context in which students make college financing decisions. McDonough and Calderone (2006) interviewed 63 college counselors at urban high schools and found perceptual differences about college affordability between the middle-income counselors and the largely low-income families that they served. McDonough and Calderone (2006) found significant differences between "what counselors perceive to be a good investment or affordable

versus what students and parents perceive to be a good investment or affordable" (p. 1712). Based on their findings, McDonough and Calderone (2006) argue for "new, innovative ways to look at issues of college affordability that will consider not only a family's material position but also the contextual nature of money, spending, and individual investment as expressed through habitus" (p. 1715). This call to action echoes Perna's (2006) argument for considering the context in which students make college-choice decisions, as outlined in her college choice model, and the theoretical gap being addressed by this study.

Cost versus convenience.

There is substantial debate among researchers about the student-level causes of increased borrowing. Redd (1994) has suggested that students borrow not in response to college costs but instead borrow more when there is increased availability of inexpensive loans. Conversely, a subsequent study by Hart and Mustafa (2008) found that borrowing among low-income students is largely affected by net cost and that these students do not borrow more when higher amounts of low-interest loans are available.

Redd (1994) examined the changes in student loan borrowing at schools in Pennsylvania during the periods of July to December 1992 and July to December 1993. Between these two periods there were significant changes to students' eligibility to borrow through the FFEL program as a result of HEA '92. These changes resulted in some students being able to borrow subsidized loans in 1993 whereas they had only been eligible for unsubsidized loans in the past. Likewise, some higher income students who were not able to borrow federal loans at all in the past were able to borrow through FFEL in 1993. Redd (1994) identified these changes as the reason for substantial increases in

the number of borrowers and amounts borrowed. He argued that students borrowed more than they actually needed, since aggregate borrowing increased substantially more than costs during this period (Redd, 1994).

Rather than examining aggregate student loan data, Hart and Mustafa (2008) reviewed the financial aid records of students entering their first year at The Ohio State University between 2000 and 2005. In 2002 the university increased the maximum Perkins Loan amount for eligible students by $2,000. This allowed the researchers to compare student borrowing before and after the change. The findings show that for students from low-income families net cost was the primary determinant of borrowing. When the Perkins Loan limit was increased these students replaced more expensive loans with this lower-cost subsidized loan rather than borrowing more in total loans (Hart & Mustafa, 2008). However, students from lower-middle and upper-middle families borrowed more when the loan limit was increased, suggesting that availability was a primary determinant of borrowing for these students (Hart & Mustafa, 2008).

Effects of Student Loan Debt

One area of research regarding student loan borrowing that has been explored in some depth, and with considerable breadth, is the relationship between student loan debt and various student outcomes. The effects of student loan debt have often been explored as a response to fears that student loan borrowing has a negative impact on students by hurting their chances of success in college or limiting their future choices regarding graduate education or career pathways. Correspondingly, literature in this area falls into several categories, which include: debt and its relationship to student success, particularly persistence, degree attainment, and time to degree; debt and its relationship to decisions

regarding whether to apply to and/or attend graduate school; and debt and its relationship to career choice, particularly in the field of law. This area of research demonstrates the potential significance of this study. If, as is often suggested, student loan debt has a negative impact on student outcomes, then it is all the more important to address the issue of increasing student loan debt through whatever means possible, including financial aid awarding practices that result in lower student borrowing.

Debt and student success.

Over the past several decades a substantial body of research has developed around the topic of student loan borrowing and its relationship to student academic outcomes and success. This research typically considers the relationship between student loan borrowing and one or more of the following outcomes: persistence, degree attainment, and time to degree. Nearly every study on this topic has addressed this issue in undergraduate populations, with the exception of Kim and Otts (2010), who explored the relationship between student loan borrowing and time to doctoral degree across several academic disciplines. Research findings on undergraduate populations are mixed. Some studies have found a positive relationship between student loan borrowing and selected student academic outcomes (e.g., Chen & DesJardins, 2008, 2010; DesJardins, McCall, Ahlburg, & Moye, 2002; Dowd, 2004), others have found a negative relationship (Dowd & Coury, 2006; Li, 2008), and still others have found no significant relationship (Braunstein, McGrath, & Pescatrice, 2001). These research findings will be explored briefly, with emphasis on more recent studies that have attempted to address some of the methodological weaknesses found in prior studies. Studies that examine the relationship between student outcomes and receipt of financial aid in general, without examining the

relationship between student outcomes and particular types of aid, such as student loans, (e.g., Ishitani & DesJardins, 2003) will not be examined.

Persistence.

Research on the relationship between student loan borrowing and student persistence can be divided into two types: those that use within-year persistence as the dependent variable (i.e., whether a student enrolls in the spring term after having been enrolled the previous fall) and those that use year-to-year persistence (i.e., whether a student enrolls in a subsequent fall term after having been enrolled the previous fall). Studies where year-to-year persistence is examined are more common and thus far have produced more conclusive results. In one example of a study regarding within-year persistence, Cofer and Somers (2001) used national datasets from 1992-1993 and 1995-1996 and found results that varied substantially, perhaps as a result of federal student loan policy changes in HEA '92 that made student loans more widely available for students in the latter dataset. For example, Cofer & Somers (2001) found that students at 2-year colleges who borrowed more than $7,000 in 1992-1993 were 8.3 percent less likely to persist than students with no debt, while 2-year college students who borrowed at the same level in 1995-1996 were 16.4 percent more likely to persist than their debt-free counterparts (p. 69).

Many of the recent studies on student loan borrowing and year-to-year persistence have found a positive relationship between borrowing and persistence, but some studies have shown a negative relationship. Some of these conflicting results may be attributed, in part, to differences in the populations being examined. Dowd (2004) studied dependent, full-time students enrolled at 4-year public colleges and universities using the

NCES Beginning Postsecondary Students (BPS) (1990-1994) dataset and found a positive relationship between borrowing federal subsidized student loans during the first year and persistence to the second year. However, in a subsequent study using the same dataset, Dowd and Coury (2006) found a statistically significant negative relationship between student loan borrowing and year-to-year persistence among students at public 2-year colleges. The rate of persistence among borrowers and non-borrowers was 27 percent and 45 percent, respectively (Dowd & Coury, 2006).

Conflicting results regarding the relationship between student loan borrowing and persistence may also be explained, in part, by limitations in research design, methodology, and availability of data. One inherent limitation is the issue of self-selection. In other words, there may be unobserved factors or reasons why some students borrow loans, thereby self-selecting into the category of loan borrower. Cellini (2008) and others have illustrated that it is problematic to control for these types of confounding variables that may affect the relationship.

Another limitation of earlier research regarding student loan debt and persistence is that it does not address the fact that student loan borrowing and its effects may vary over time. Chen and DesJardins (2008, 2010) have attempted to address this limitation by incorporating the element of time in analyzing the relationship between student loan borrowing and year-to-year persistence, to determine the nature of the relationship at various points in time during the college experience. Using data from the NCES BPS (1995-2001) survey and event history methods of analysis, Chen and DesJardins (2008) sought to determine whether different types of financial aid help to close the persistence gap between lower- and upper-income students at 4-year colleges and universities. They

found that students who borrowed loans were 25.1 percent less likely to drop out, though there was no significant interaction effect between loans and parental income (Chen & DesJardins, 2008, p. 12). Likewise, there was no significant interaction between loans and year in college. In other words, during any year in college (e.g., first, second, third, etc.), students who borrowed loans were not significantly more or less likely to drop out compared to students who borrowed loans in any other year in college.

Another study by Chen and DesJardins (2010) explored the differential effects of financial aid on the persistence of different racial and ethnic groups using the same dataset. Chen and DesJardins (2010) again used event history analysis to determine effects over time. They found a statistically significant positive relationship between borrowing subsidized loans and persistence, but no significant relationship between borrowing unsubsidized loans and persistence (Chen & DesJardins, 2010). Nor did they find any interaction between race/ethnicity and loan borrowing, as these variables relate to persistence. However, Chen and DesJardins (2010) did find a time-varying effect of unsubsidized loans. They found a significantly lower probability of drop out during the sixth year for unsubsidized loan borrowers, which they suggest, "may be an artifact of the small number of students still at risk of dropout at the end of the six year observation period" (Chen & DesJardins, 2010, p. 197). When the research literature on the topic of student loan borrowing and persistence is reviewed, it seems that the most recent, methodologically rigorous studies have demonstrated a positive relationship between borrowing and persistence. In other words, research suggests that students who borrow loans have a significantly greater likelihood of persisting in college.

Degree attainment.

There is a smaller body of literature regarding student loan borrowing and degree attainment, and the research findings are less conclusive. Some of the studies that examined persistence (Dowd, 2004; Dowd & Coury, 2006) also examined the relationship between student loan borrowing and degree attainment, but found no significant relationship. Li (2008) examined institutional-level and individual-level predictors of degree attainment using hierarchical linear modeling (HLM) and found that students using only grants to finance their education and students using a combination of grants and loans were both significantly more likely to obtain their 4-year degree than students who used only loans. In general, Li (2008) found a significant negative relationship between student loan borrowing and degree attainment. Conversely, DesJardins, McCall, Ahlburg, and Moye (2002) found a significant positive relationship between student loan borrowing and degree attainment. DesJardins et al. (2002) used the same event history analysis techniques used by Chen and DesJardins (2008, 2010) and found that loan borrowing is positively related to graduation, but the positive effects decline over time. Given the limited number of studies and the inconclusive results thus far, the relationship between student loan borrowing and degree attainment is a rich area for future research.

Time to degree.

Finally, a limited number of studies have examined the relationship between student loan borrowing and time to degree, though once again, the findings are inconsistent. In addition to degree attainment, Li (2008) also examined time to degree in an undergraduate population but found that various types of financial aid (e.g., grants, loans, work-study) had no significant effects on time to degree. Kim and Otts (2010)

examined the relationship between student loan borrowing and time to degree among doctoral students and generally found a negative relationship. In other words doctoral students who borrowed large amounts of loans (greater than $50,000), took fewer semesters to graduate. This finding held true for all academic disciplines with the exception of the social sciences. Kim and Otts (2010) explained that their findings suggest "that students with large loan amounts may be more motivated to complete a degree and enter the workforce as quickly as possible so they do not accumulate additional debt and can begin to reduce the volume of loans by entering repayment earlier" (p. 22).

Taken as a whole, the body of literature regarding the relationship between student loan borrowing and various student academic outcomes, including persistence, degree attainment, and time to degree, suggests a somewhat surprising conclusion—that students who borrow may be more successful than their counterparts who do not borrow student loans, all else being equal. Of course it is important to remember that these findings suggest correlation, not necessarily causation, so it would be foolish to encourage student loan borrowing under the assumption that borrowing actually causes students to be more successful. Nevertheless, this body of literature does not provide conclusive evidence to suggest that borrowing should be discouraged based on student academic success alone.

Debt and graduate school decisions.

Research regarding undergraduate student loan debt and its relationship to decisions regarding whether to apply to or attend graduate school has been conducted and published as early as the 1980s. Findings from this early body of research (e.g., Fox,

1992; Sanford, 1980; Schapiro, O'Malley & Litten, 1991; Weiler, 1991) are mixed as to whether debt plays a role in decisions regarding graduate school. Using data from a national survey of 1985-1986 college graduates, Fox (1992) examined the relationship between borrowing and enrollment in graduate or professional school within one year of graduation. Fox (1992) found that, among women, there was a significant negative relationship between borrowing and graduate school enrollment, though the effect size was small. Among men in the sample there was no statistically significant relationship. An earlier study by Sanford (1980) that also used a national dataset found a positive relationship between student loan borrowing as an undergraduate and graduate school enrollment, though the author noted that the large sample size may have contributed to the finding of significance, given the weak relationship. Two other early studies regarding the relationship between student loan borrowing and the pursuit of graduate education arose from a prevalent concern in the late 1980s that the number of students seeking Ph.D. degrees and subsequent academic employment would not be sufficient to fill future faculty openings. Weiler (1991) addressed the concern by examining a national sample of undergraduates to determine whether loans had an effect on graduate school enrollment, and Schapiro, O'Malley, and Litten (1991) explored the issue among graduates of elite colleges and universities. Neither Weiler (1991) nor Schapiro et al. (1991) found a significant relationship between student loan borrowing and graduate school enrollment or intention to enroll.

Two more recent studies regarding the relationship between student loan borrowing and graduate school enrollment utilize data from before and after HEA '92, when federal loan limits were increased and federal student loans were made available to

a greater number of students. Heller (2001) and Millett (2003) both investigated this topic using data from the Baccalaureate and Beyond Longitudinal Study of 1992-1993 graduates. Millett (2003) examined the post-baccalaureate decisions of students who graduated in 1992-1993 and indicated during their senior year that they expected to pursue a doctoral degree. She found that for this cohort undergraduate debt was a significant predictor of applying to graduate school or first professional school. For example, Millett (2003) found that students with undergraduate debt of $5,000 to $9,999 were 1.6 times less likely to apply than their counterparts with no debt. However, among students who actually applied for graduate or first professional school, undergraduate debt did not have a significant effect on enrollment (Millett, 2003). Nevertheless, this finding suggests that the pool of potential doctoral students may be limited due to undergraduate debt.

Similarly, Heller (2001) examined the issue of undergraduate student loan debt and its possible impact on students' decisions to attend graduate school. Both studies used multivariate analysis to determine the relationship between undergraduate loan debt and students' decisions regarding graduate school, though Heller used as his dependent variable whether a student actually enrolled in graduate school, and did not consider whether there was a relationship between debt and students' decisions to apply to graduate school. Heller (2001) also did not limit his sample to students who expressed an intention to pursue graduate education. Heller (2001) found that undergraduate debt was a marginal predictor of graduate school enrollment, with higher levels of borrowing related to a decreased likelihood of enrolling, but that other factors such as grade point

average and academic major were most influential in determining whether a student enrolled in graduate school.

Kim and Eyermann (2006) attempted to determine the effects of undergraduate loans on students' plans to attend graduate school, and whether those effects changed over time. They found no significant relationship between undergraduate borrowing and plans to attend graduate school for students who graduated before HEA '92 (Kim & Eyermann, 2006). Kim and Eyermann (2006) also found that for the cohort who attended from 1994 to 1998 borrowing had a slightly positive effect on middle-income students, meaning that those who borrowed were more likely to plan to attend graduate school. This finding is interesting because it suggests a possible positive outcome of borrowing, at least for middle-income students.

Malcom and Dowd (2012) investigated the relationship between undergraduate student loan debt and graduate school enrollment among STEM baccalaureates. In particular, Malcom and Dowd (2012) focused on the interaction between undergraduate debt and race/ethnicity to determine whether the relationship between undergraduate student loan debt and graduate school enrollment may vary according to race/ethnicity. They found a significant negative relationship between borrowing at typical levels and graduate school enrollment regardless of racial/ethnic group, meaning that students who borrowed a typical amount of student loans were less likely to enroll in graduate school within two years. Among students who borrowed heavily, the relationship was mixed. A negative relationship was found for Latino and White students, while no significant relationship was found for African Americans and Asians.

Although more recent studies such as Heller (2001), Millett (2003), and Malcom and Dowd (2012) support the notion that student loan borrowing is discouraging some students from enrolling in graduate school, contrasting findings from Kim and Eyermann (2006) indicate that the evidence is inconclusive. Even these recent studies suffer from various limitations and inconsistencies that make interpretation and generalization problematic. For example, some of the studies used actual graduate school enrollment as the dependent variable (e.g., Malcom and Dowd, 2012) while others used plans to enroll (e.g., Kim and Eyermann, 2006). Likewise, in her sample, Millett (2003) used only students who reported during their senior year that they expected to pursue a doctoral degree, whereas other studies used a sample without regard to educational aspirations. Finally, many of these studies also used methodology that did not sufficiently address the self-selection bias that was noted in the literature regarding the relationship between student loan borrowing and student academic success. These and other limitations underscore the difficulty in drawing a definitive conclusion regarding the relationship between undergraduate student loan debt and graduate school enrollment from the existing literature.

Debt and career choice.

The relationship between debt and the career choices that students make after they graduate is another area where research exists but findings have been mixed. The career choices of law graduates who have borrowed have been of particular interest to researchers for several reasons. First, borrowing is highest among law students and others seeking professional degrees, such as medicine. In 2011-2012, law students at public institutions borrowed educational loans at an average amount of $84,600 while

their counterparts at private institutions borrowed $122,158 on average (American Bar Association, 2013a). Secondly, in the field of law there is a wide discrepancy between salaries in the public and non-profit sectors versus the private sector. The average annual salary among 2013 law graduates who were employed in the private sector was $97,179, while law graduates working in the public sector earned $52,102 on average (NALP, 2014). This gap between salaries in the public and private sectors has widened over time, due to salaries in private practice that have increased at a much greater rate than those in other sectors. The 2001 median starting salary in private practice represented an 80 percent increase over 1991, compared with 37 percent increases for both government and public interest law (Equal Justice Works et al., 2002, p. 14). If this trend continues the salary disparity between the legal salaries in the private and public sectors will only worsen. Some have questioned whether the U.S. legal system can function properly given this disparity, since the justice system depends on qualified attorneys in the government and public interest sectors. Given the large amounts of student loan debt with which many law graduates enter the workforce, some scholars and practitioners have expressed concern that these sectors will be unable to attract qualified graduates who cannot afford to work for such low wages. These concerns have prompted several studies regarding the relationship between student loan debt and law graduate career choice.

Chambers (1992) published one of the earliest studies on this topic. Chambers (1992) studied whether student borrowing had an impact on the job choices of graduates at nine law schools, as well as the likelihood that these graduates would have difficulty repaying their loans. Chambers (1992) found that there was indeed a small, but

significant, relationship between loan debt levels and job choices. Students who graduated with high levels of debt were more likely to choose jobs in the private sector, which tend to pay more, and less likely to choose jobs in the government or service sectors, which tend to pay less (Chambers, 1992). Chambers (1992) also found that there is a substantial minority of students who are likely to face difficulty in repaying their loans. Black and Latino students, as well as students with low law school grades, were more likely to belong to this group.

In more recent years several national non-profit organizations commissioned similar reports on this issue. In 2001, the American Bar Association formed the ABA Commission on Loan Repayment and Forgiveness to examine the issue of law student loan debt and its impact on law graduates' ability to choose careers in public service law. Among the findings issued in its 2003 report was that high student debt prevents many law graduates from pursuing careers in public service law and that graduates who do pursue careers in public service frequently leave after two to three years of service, most often because of low salaries and high educational debt (American Bar Association, 2003). The report also concluded that loan repayment assistance programs (LRAP) are successful in helping graduates take and remain in public service jobs, but LRAPs are limited in number and scope (American Bar Association, 2003).

In 2002, Equal Justice Works, NALP, and the Partnership for Public Service published a report that included similar findings as those of the American Bar Association, including the finding that 66 percent of respondents stated that law school debt keeps them from considering a public interest or government job (Equal Justice Works et al., 2002, p. 19). This particular report also focused on law graduate salaries in

the different sectors and the reality of repaying large sums of debt on the salary of a low-paying public interest or government job. Additionally, Equal Justice Works et al. (2002) included results from a survey of law employers, which provided insight into the difficulties related to law school debt that government or public interest employers face in recruiting and retaining attorneys.

McGill (2006) characterizes these reports as "largely anecdotal" and questions the generalizability of their findings. She argues that since the survey results in Equal Justice Works et al. (2002) were based on the responses of only 1,622 third-year law students, or 4 percent of approximately 37,900 third-year students across the nation at that time, the sample was not representative of the law school population (McGill, 2006). McGill (2006) also suggests that "students who actually had decided against public interest careers due to concerns about the ability to pay off their debts were considerably more likely to respond to the survey than was the general population of law students" (p. 680). This supposition, if true, would indicate a self-selection bias and compromise the validity of the survey, warranting caution in interpretation. McGill (2006) is similarly skeptical of the American Bar Association (2003) report, which relies on the same survey data used in Equal Justice Works et al. (2002). She points out that the American Bar Association (2003) even acknowledges that other factors, such as the salary disparity between the public and private sectors, may play a role in students' career decisions, particularly the decision to opt out of public interest careers.

McGill (2006) offers her own study, which used aggregate law school data and student survey data to determine whether there is a relationship between student loan debt and entrance into public service careers. First, McGill used aggregate law school data to

determine whether average debt at a law school predicted the percent of government or public interest jobs (GPI jobs) taken by graduates of that law school in 2002. She found no significant relationship between average debt and percent of GPI jobs. In the second part of her analysis, McGill (2006) used survey data from the Law School Admissions Council's Bar Passage Survey (BPS) of 1994 graduates to examine independent variables not available in the aggregate law school data, such as initial preference for the public interest sector. Another advantage of this dataset was that it included information regarding respondents' actual first job following graduation. This is an advantage over the data cited in Chambers (1992), Equal Justice Works et al. (2002), and the American Bar Association (2003), which was based on students' expectations rather than actual outcomes. Using this data, McGill (2006) again found no significant relationship between student loan debt and the dependent variable, in this case, whether the graduate's first job was a GPI job.

McGill's (2006) findings call into question what has become widespread concern in the legal community—that high levels of student loan debt are discouraging law graduates from careers in the public interest sector. However, McGill (2006) acknowledges several limitations to her study related to the LSAC dataset. She acknowledges that the data are outdated given the continued increase in student loan borrowing and growing disparity in salaries between the private and public sectors (McGill, 2006). Certainly, recent student loan data from the American Bar Association (2013a) and salary data from NALP (2014) underscore this point. The current state of the legal employment market resulting from the recent economic downturn also calls into question the validity of applying these findings to today's law students and graduates.

While McGill's (2006) research design and methodology is more rigorous than earlier reports and studies, its reliance on old data makes it insufficient to draw conclusions regarding the role that student loan debt plays in the career choices of law students today.

Institutional Financial Aid Policies and Practices

Given the number of postsecondary institutions in the United States, which vary by level (i.e., two-year, four-year, graduate and professional) and control (i.e., public, private non-profit, proprietary), and the varying types and funding levels of financial aid from non-federal sources (i.e., state, local, institutional), it may seem intuitive that institutional financial aid policies and practices vary by institution. Several national surveys of chief financial aid administrators support this intuition, and provide evidence to demonstrate that these varying policies and practices result in financial aid award packages that vary by institution and by student, both in type and amount of aid. What is not as intuitive, given that loan types and maximum amounts are set by federal regulations, and may in fact surprise those outside of the field of financial aid administration, is the extent to which the awarding of federal student loans varies by institution.

At the undergraduate level, the 2001 Survey of Undergraduate Financial Aid Policies, Practices, and Procedures (SUFAPPP), found that during the 1999-2000 financial aid award year about 61 percent of four-year public colleges and 49 percent of four-year private colleges routinely packaged three or more loans in the awards of first-year undergraduates, compared with 7 percent of community colleges and 22 percent of two-year private colleges (College Board & NASFAA, 2002, p. 21). Twelve percent of all institutions did not routinely include any federal student loans in student financial aid

award packages (College Board & NASFAA, 2002, p. 21). The cumulative debt of graduates from these institutions also varied, substantially in some cases. Students who graduated during the 1999-2000 academic year from SUFAPPP-respondent four-year private institutions graduated with $15,523 in average federal student loan debt, while their counterparts at four-year public institutions graduated with $13,535 in federal student loan debt (College Board & NASFAA, 2002, p. 21). These figures are perhaps surprising, given that a greater percentage of first-year students at four-year public colleges were packaged with three or more loans (61 percent), as compared to private four-year colleges (49 percent), but are likely explained by higher tuition costs at private institutions. Graduates of public two-year colleges that responded to the SUFAPPP left with $4,403 in federal student loan debt, which is not surprising given the low percentage of these institutions that routinely package three or more loans (7 percent) and the lower cost of attendance at these institutions (College Board & NASFAA, 2002, p. 21).

The 2003 Survey of Graduate Aid Policies, Practices, and Procedures (SOGAPPP) provides similar information about graduate and professional programs. The results of this survey reflect the responses of 502 chief financial aid administrators at graduate and professional programs within public, private, and proprietary institutions throughout the United States, who answered questions about the financial aid policies, practices and procedures of their institutions and provided information regarding student financial need and awards. While law programs made up only 10.7 percent of the survey population they responded to the survey at a higher rate, and therefore made up 18.3 percent of the 502 survey respondents (NASFAA, 2004, p. 16). Of those law school

respondents, 38 percent represented law programs at public institutions and 61 percent represented law programs at private institutions (NASFAA, 2004, p. 17).

Though somewhat dated, the results of SOGAPPP highlight important information regarding the costs that law students continue to face, particularly the large percentage of law students who enroll on a full-time basis and incur higher average costs than those who enroll part-time. During the 2002-2003 school year, 87 percent of students at public law schools and 81 percent at private law schools were enrolled full-time (NASFAA, 2004, p. 15). The average resident tuition and fee charges for full-time law students were $11,527 for students at public institutions and $26,578 for students at private institutions (NASFAA, 2004, p. 18). The total cost of attendance, which includes direct costs like tuition and fees and indirect costs like books, room and board, and transportation, for full-time students at public and private law schools was $24,436 and $43,126, respectively (NASFAA, 2004, p. 19). To pay for these costs, 79 percent of law students at public schools received aid, as compared to 85 percent of students at private law schools (NASFAA, 2004, p. 20). Of those aid recipients, 90 percent at public law schools and 89 percent at private law schools received student loans (NASFAA, 2004, p. 21).

The SOGAPPP results that are most relevant to this study relate to aid packaging strategies and cumulative debt, particularly those concerning law schools. At the law schools that responded to SOGAPPP, student aid packages during the 2002-2003 award year consisted of 58 percent federal loans, 25 percent grants, scholarships, and fellowships, 15 percent non-federal loans, and 2 percent work-study or assistantships (NASFAA, 2004, p. 23). These figures illustrate law students' heavy reliance on student

loans to finance their legal education. In fact, at a rate of 58 percent, law schools were more likely than any other type of graduate or professional program to routinely award three or more loans in the packages of their aid awardees (NASFAA, 2004, p. 31). This compares to 43 percent of dental schools, 32 percent of medical schools, and 23 percent of business programs (NASFAA, 2004, p. 31). Among law schools, the survey found that 18 percent of law schools did not automatically award any loans, while 16 percent routinely awarded Subsidized and Unsubsidized Stafford Loans, 26 percent routinely awarded both types of Stafford Loans with Perkins Loans, and 16 percent routinely awarded both types of Stafford Loans and alternative or private loans (NASFAA, 2004, p. 31). While these figures have certainly changed in recent years with the creation of the Graduate PLUS Loan, this finding confirms that there is variation of loan awarding policies among institutions. With the exception of graduates from dental schools, law graduates were more likely than any other type of graduate or professional student to graduate with student loan debt. According to SOGAPPP, 82 percent and 86 percent of law students who graduated in 2002-2003 from public and private institutions, respectively, left with student loan debt. The average cumulative loan debt for these graduates was $54,025 for public law schools and $77,183 for private law schools (NASFAA, 2004, p. 35).

Though the findings from College Board and NASFAA (2002) and NASFAA (2004) are based on survey data that are more than 10 years old, they remain valuable. While there is much more recent data available regarding student loan borrowing levels, there is no more recent data that provides such detailed information about the financial aid awarding practices of postsecondary institutions around the U.S., at both the graduate

and undergraduate levels. For the purposes of this study, these survey results are important to demonstrate the way in which loan awarding practices vary from school to school.

While these national surveys of chief financial aid administrators successfully demonstrate the varying financial aid awarding practices among postsecondary institutions, including the varying loan awarding practices at law schools, they do not demonstrate or explain a relationship between these practices and any student outcomes. In a more recent study, MacCallum (2008) attempted do just that. MacCallum (2008) used the results of a 2002 survey of all 108 community colleges in California and combined them with student academic data to determine the relationship between financial aid processing policies and student enrollment, retention, and success. MacCallum (2008) found, for example, a negative relationship between the number of Institutional Student Information Reports (ISIR) processed per full-time equivalent staff member and enrollment and success rates. He also found a strong negative relationship between the presence of one of the Big 3 student information systems (i.e., Banner, Datatel, and PeopleSoft) and student retention and success (MacCallum, 2008). These and other findings suggest that there is a relationship between the policies and practices of a financial aid office and student academic outcomes. However, a limitation of MacCallum's (2008) study is that he did not consider institutional-level characteristics, such as climate or culture, which may act as confounding variables. In other words, though MacCallum (2008) found statistically significant relationships between financial aid office policies and practices and student outcomes, there may be variables he did not include in his model that better account for variance in student outcomes.

Summary

Human capital theory has often been used as a theoretical framework for research regarding student loan borrowing decisions, and indeed it may help to explain why some students choose to borrow student loans, and other students choose to forgo the pursuit of higher education. However, human capital theory is insufficient for understanding decision-making regarding the amount of student of student loans to borrow. Therefore, this study utilized a conceptual framework grounded in behavioral economics in exploring student loan borrowing decisions.

Empirical research regarding the willingness to borrow and decisions regarding the amount borrowed has produced findings that are generally consistent. Prior research suggests that students from lower socioeconomic backgrounds and underrepresented minority groups may be less willing to borrow student loans and as a result may forgo higher education. Qualitative research findings and human capital theory suggest that the decision not to pursue higher education may result from a perception of higher education as risky. That is, these students may be less likely to perceive that the benefits of higher education will outweigh the costs. Empirical evidence also suggests that students from racial-ethnic minority groups are more likely to face high student loan debt levels, increasing the actual cost of higher education for these students.

Prior research regarding the effects of student loans on student academic outcomes, graduate school decisions, and career choices, has produced inconclusive findings. The fear that student loan borrowing is having a negative impact on student success in school and future life choices is not borne out by the literature, though it is important to note that most of the existing literature was conducted using borrowing data

from periods when the long-term costs of borrowing were substantially lower, due to both lower amounts borrowed and lower interest rates. It will be several years before the true impact of today's heavy student loan borrowing is known.

Chapter III: Research Methodology

The present study explored the problem of increased levels of law student loan borrowing. Institutional loan awarding practices and law student demographics were examined to determine the extent to which they predict the loan amount that law students borrowed. This study used secondary data from Midsize Law School, a private non-profit law school, and the quantitative research method of multiple regression, to answer the following research questions:

1. To what extent do an institution's financial aid awarding practices and student demographics predict the loan amount that law students borrow?
    a. What percent of variance in loan amount borrowed is explained by the overall model?
    b. Which variables are significant predictors of loan amount borrowed while controlling for relations among other predictors in the overall model?
    c. Does initial loan amount offered explain a significant percent of variance in loan amount borrowed above what is explained by the other predictors in the overall model?
    d. Is there a significant difference in the relationship between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010 as compared to 2010-2011, given the change in loan awarding practices?

e. What percent of variance in loan amount borrowed is explained by initial loan amount offered, student status, and the interaction between initial loan amount offered and student status?

f. What percent of variance in loan amount borrowed is explained by initial loan amount offered, class level, and the interaction between initial loan amount offered and class level?

The primary hypothesis of this study, which was based on a conceptual framework grounded in behavioral economics, was that there was a significant positive relationship between the initial loan amount offered and the loan amount borrowed. This hypothesis, the research questions listed above, and the statistical models and methods used to answer them, are explored in greater detail later in this chapter.

Population

Midsize Law School is the law school of a private non-profit university that is classified as a Research University (high research activity) under the Carnegie Classification system (Carnegie Foundation for the Advancement of Teaching, 2012). Midsize Law School is accredited by the American Bar Association's Section of Legal Education and Admissions to the Bar, which is recognized by the U.S. Department of Education as the national accrediting agency for programs leading to the Juris Doctor (J.D.) degree (Midsize Law School, 2012).

At the start of the 2010-2011 academic year, which was the latest academic year examined in this study, Midsize Law School enrolled approximately 950 students in its J.D. program, with about 80 percent enrolled in the full-time day division and the remainder enrolled in the part-time day or evening divisions (Law School Admissions

Council & American Bar Association, 2011). Of these students, approximately 45 percent were women and 23 percent were racial/ethnic minorities (Law School Admissions Council & American Bar Association, 2011). The median undergraduate grade point average (GPA) among first-year students was 3.55 and the median score on the Law School Admissions Test (LSAT) was 161 out of 180 possible points (Law School Admissions Council & American Bar Association, 2011). The age range of students in the 2011 entering class was 21 to 53 years of age (Midsize Law School, 2012). Demographic characteristics of enrolled J.D. students, such as the age, gender, and racial/ethnic data referenced above, were consistent across the three academic years that were considered in this study. For the 2011 entering class, approximately 3,700 applications were received and a total of 308 first-year students were enrolled (Midsize Law School, 2012).

The first year of the J.D. program at Midsize Law School consists of a prescribed curriculum from which students may not deviate. Full-time students enroll in a total of 30 credits during their first year, with enrollment of 14 credits in the fall and 16 credits in the spring, while part-time students enroll in 22 credits during their first year, with 11 credits in both the fall and spring semesters. In subsequent academic years students have more latitude in choosing their courses and total credit load. J.D. students are considered full-time when enrolled in 12 or more credits during the fall or spring semesters and part-time when enrolled in fewer than 12 credits. To earn the J.D. degree a student must complete 87 total credit hours with a cumulative grade point average of 2.3 or higher (Midsize Law School, 2012). Full-time students typically complete the J.D. program in

three years and often do not enroll during the summer term, while part-time students typically complete the program in four years and frequently enroll during the summer.

During the 2010-2011 academic year, tuition for first-year students was charged at a flat rate of $39,690 per year for full-time students and $29,140 for part-time students (Midsize Law School, 2012). Continuing students were charged tuition at a rate of $1,250 per credit hour (Midsize Law School, 2012). The total cost of attendance also included the following indirect educational costs: $1,013 for loan fees, $14,760 for room and board, $1,926 for transportation, $2,952 for miscellaneous expenses, and $1,500 for the cost of a computer (first-year students only) (Midsize Law School, 2012). The cost of attendance is described in greater detail later in this chapter.

Sample

The sample for this study consisted of all J.D. students who borrowed one or more federal student loans while enrolled at Midsize Law School during the 2008-2009, 2009-2010, or 2010-2011 academic years. Students who borrowed only during the summer term were not included in the analytical sample. Table 3.1 shows the number of borrowers per year.

Table 3.1

Number of Borrowers and Loan Amount Borrowed by Academic Year

Academic Year	*n*	Mean	Median	SD	Minimum	Maximum
2008-2009	775	31696	32340	13892	2125	60117
2009-2010	773	34660	36809	14876	3000	70735
2010-2011	767	35252	35844	15215	2000	72335

Note. Some students were enrolled during, and borrowed loans in, more than one academic year and are therefore included more than once in the total sample.

The total sample included 2,315 cases. However, that total number does not equal the number of unique borrowers, since some students may have been enrolled during, and

borrowed loans in, more than one academic year. Those students are therefore included more than once in the total sample, but they are treated as a separate case each year since some of the variables (e.g., income, loan amount borrowed) vary from one academic year to another even in the case of the same student.

Twenty percent of students enrolled in the J.D. program during these academic years did not borrow any federal student loans and have been excluded from the sample. They have been excluded from the sample primarily because, since they did not borrow loans, data regarding these students cannot be used to answer any of the research questions. Also, since many of the students who did not borrow federal student loans did not complete the Free Application for Federal Student Aid (FAFSA), the dataset did not include several data elements for these students.

Descriptive Statistics of the Sample

The descriptive statistics for the total sample are presented in Tables 3.1, 3.2 and 3.3. Table 3.1 shows descriptive statistics regarding the dependent variable, loan amount borrowed, for all three academic years included in the sample. In the years prior to the change in loan awarding practice, 2008-2009 and 2009-2010, the mean loan amounts borrowed were $31,696 and $34,660, respectively. In the first year that the new loan awarding practice was implemented, 2010-2011, the mean loan amount borrowed was $35,252.

Table 3.2 provides descriptive demographics for the categorical independent variables, including gender, race, class level, student status, and marital status.

Table 3.2

Descriptive Demographics—Categorical Independent Variables (N = 2315)

Characteristic	*n*	%
Gender		
Male	1236	53%
Female	1079	47%
Race		
Native Hawaiian/Pacific Islander	52	2%
Black/African American	135	6%
Asian	155	7%
Hispanic/Latino	136	6%
Unknown	235	10%
White	1602	69%
Class Level		
First-year	739	32%
Second-year	736	32%
Third-year	733	32%
Fourth-year	107	5%
Student Status		
Full-time	1895	82%
Part-time	420	18%
Marital Status		
Unmarried	1965	85%
Married	350	15%

Table 3.3 provides descriptive statistics for the continuous independent variables, including age, household size, income, Expected Family Contribution, cumulative GPA, number of credits, tuition, cost of attendance, non-loan aid, and loan amount offered.

Table 3.3

Descriptive Statistics—Continuous Independent Variables (N = 2315)

Characteristic	Mean	Median	SD	Minimum	Maximum
Age	26.02	25.00	4.24	20.00	56.00
Household size	1.29	1.00	0.73	1.00	6.00
Income, *dollars*	24915.85	10000.00	37558.27	-7477.00	450889.00
Expected Family Contribution, *dollars*	7445.50	1315.00	13200.99	0.00	99999.00
Cumulative GPA	3.13	3.16	0.38	0.53	4.00
Number of credits	26.09	28.00	5.04	3.00	37.00
Tuition, *dollars*	31775.34	33043.00	6434.95	3405.00	49129.00
Cost of attendance, *dollars*	57730.26	57111.00	11682.57	17192.00	85311.00
Non-loan aid, *dollars*	9287.34	4135.00	11263.05	0.00	47800.00
Loan amount offered, *dollars*	38990.82	40500.00	9918.22	5250.00	74118.00

Measures

To answer the research questions presented above, this study utilized comprehensive data regarding students enrolled in the J.D. program at Midsize Law School during the following academic years: 2008-2009, 2009-2010, and 2010-2011. There were several reasons why this secondary dataset was appropriate for answering the research questions.

First, the dataset was comprehensive in that it included academic, financial, and demographic data elements from multiple primary data sources. These data elements and sources are described in greater detail later in this chapter. In particular this dataset included the loan amounts that students were offered in their initial loan award packages, which was essential in determining the extent to which institutional awarding practices predicted the amount law students borrowed. Larger datasets, such as those administered by the National Center for Education Statistics, may include data from multiple

institutions, but they lack data elements like loan amount offered, rendering them insufficient for answering the research question.

Second, this dataset spanned several academic years and represented two distinct loan awarding approaches, which allowed for the comparison of two non-equivalent groups. In 2008-2009 and 2009-2010, Midsize Law School employed a loan awarding practice wherein students were awarded a limited amount of Graduate PLUS Loan based on the average amount borrowed by students during the previous year. In 2010-2011, Midsize Law School employed a loan awarding policy wherein students were awarded a Graduate PLUS Loan up to the full cost of attendance, less any other aid awarded. The fact that this dataset included student loan data from the same institution during two periods when it employed different loan awarding practices provided a unique opportunity to examine the relationship between loan awarding practices and student loan borrowing.

Finally, given the fact that Midsize Law School enrolls a diverse student body, this dataset provided the opportunity to explore demographic variables that that may predict the amount that law students borrowed.

Dependent variable.

The single dependent variable for this study was loan amount borrowed in a given academic year. This amount represented the total of all educational loans, including Perkins Loans, Subsidized Stafford Loans, Unsubsidized Stafford Loans, Graduate PLUS Loans, and alternative or private loans, borrowed by a student for the given academic year. The value for each loan type was entered in Banner, Midsize Law School's student information system, by financial aid office staff as each student's loans were processed.

Loan amount borrowed is a continuous variable with a range of possible values from $1 to the maximum cost of attendance for the given year, since no student may borrow more than her cost of attendance, as determined by the financial aid office.

Independent variables.

Race/ethnicity.

Race/ethnicity was used as an independent variable for this study. Race/ethnicity is a nominal variable. Race/ethnicity was determined based on a student's response to the following question on the application for admission: "Please identify your racial and ethnic background by checking one or more of the following boxes" (Midsize Law School, 2012). Based on their responses, students were grouped into one of seven racial/ethnic categories, as required for reporting to the Integrated Postsecondary Education Data System. These racial/ethnic categories were American Indian or Alaska Native, Asian, Black or African American, Hispanic/Latino of any race, Native Hawaiian or Pacific Islander, White and unknown. Students were not required to complete this question on the application, and in such cases the value was recorded as unknown. Rather than using listwise deletion to deal with these missing values, which would have reduced the sample size, unknown was treated as its own category, which is consistent with IPEDS standards. The values for this variable were dummy-coded to facilitate data analysis and interpretation. Race/ethnicity of White was used as the reference group. None of the students in the sample reported their race as American Indian or Alaska Native so no dummy variable was necessary for that group. Race/ethnicity was housed in Banner and the primary source of this data element was the admissions application.

Gender.

Gender was used as an independent variable for this study. Gender is a nominal variable. Gender was reported by the student on the admissions application as either male or female (Midsize Law School, 2012). In Banner a response of male was coded as M and a response of female was coded as F. These values were dummy-coded to facilitate data analysis and interpretation. Male was used as the reference group. Gender was housed in Banner and the primary source of this data element was the admissions application.

Age.

Age was used as an independent variable for this study. Age is a continuous variable. For this study age was calculated for each student each academic year using her date of birth, as reported by the student on her admission application, and a fixed date at the start of the term. The range of values for this variable were 20 to 56. Date of birth, which was used to calculate age, was housed in Banner and the primary source of this data element was the admissions application process.

Class level.

Class level was used as an independent variable for this study. Class level is a continuous variable that refers to the number of years the student has been enrolled in the J.D. program. A student in her first year has a class level code of 01, a student in her second year has a class level code of 02, a student in her third year has a class level code of 03, and a student in her fourth year has a class level code of 04. Though some students may be enrolled in the J.D. program for more than four years, those students have a class level code of 04, so the range of possible values was 1 to 4. The value for this data

element, which was housed in Banner, was determined by the institution using the number of credits earned.

Cumulative grade point average.

Cumulative grade point average (GPA) was used as an independent variable for this study. Cumulative GPA is a continuous variable that represents students' academic performance in law school. The range of possible values was 0 to 4.0. The value for this data element, which was housed in Banner, was determined by the institution using the number of credits attempted and quality points earned.

Student status.

Student status was used as an independent variable for this study. Student status is a nominal variable. Student status was determined based on a student's enrollment in the full-time day division or part-time evening or day divisions. (Midsize Law School, 2012). In Banner, enrollment in the full-time division was coded as L, enrollment in the part-time day division was coded as P, and enrollment in the part-time evening division was coded as N. For this study all part-time students were grouped together, since the number of students enrolled in the part-time day division was small. These values were dummy-coded to facilitate data analysis and interpretation. Student status of full-time was used as the reference group. Student status was housed in Banner and the primary source of this data element was the admissions office, which determined the placement of each student when the student was admitted.

Marital status.

Marital status was used as an independent variable for this study. Marital status is a nominal variable. Marital status was reported by the student on the FAFSA in response

to the following question: "What is your marital status as of today?" (Federal Student Aid, 2012). On the FAFSA and in Banner a response of "I am single" was coded as 1, a response of "I am married/remarried" was coded as 2, a response of "I am separated" was coded as 3, and a response of "I am divorced or widowed" was coded as 4. These values were dummy-coded to facilitate data analysis and interpretation. The single, separated, and divorced/widowed statuses were combined to create an unmarried status, which served as the reference group. Marital status was housed in Banner and the primary source of this data element was the FAFSA.

Household size.

Household size was used as an independent variable for this study. Household size is a continuous variable. Household size was reported by the student on the FAFSA in response to the following question: "How many people are in your household?" (Federal Student Aid, 2012). This number included the student, her spouse, her children and any other people who lived with the student and for whom she provided more than half their support during the academic year for which the FAFSA was being filed. The range of possible values was 1 to 99. Household size was housed in Banner and the primary source of this data element was the FAFSA. Household size was found to have a strong positive correlation with marital status, so it was discarded from the model in order to prevent issues of multicollinearity.

Income.

Income was used as an independent variable for this study. Income is a continuous variable. Income was reported by the student on the FAFSA in response to the following question: "What was your (and your spouse's) adjusted gross income for

2010?" (Federal Student Aid, 2012). The range of possible values was $0 to $999,999. Exact income values were used, rather than grouping income into categories such as low, middle, or high. Income was housed in Banner and the primary source of this data element was the FAFSA.

Though income is often used as a proxy for socioeconomic status (SES), for the purposes of this study income is not a reliable indicator of a student's socioeconomic background, since graduate students are not required to report parent income on the FAFSA. For example, a student who comes from a high-SES background may have zero income, since he may not work while in law school. One might assume that a student with zero income can be classified as having low SES, so it is important to understand the limitations of this data element.

Expected Family Contribution.

Expected Family Contribution (EFC) was used as an independent variable for this study. EFC is a continuous variable that is calculated by the federal government using a formula specified by law. EFC is a measure of how much the student and her family can be expected to contribute to her education. The range of possible values is 0 to 99,999. EFC was housed in Banner and the primary source of this data element was the FAFSA.

Number of credits.

Number of credits was used as an independent variable for this study. Number of credits is a continuous variable that represents students' enrollment during the academic year. The range of possible values was 1 to 36. The value for this data element was determined from student enrollment records housed in Banner by combining the number of credits in which the student enrolled during fall and spring semesters. This data

element included all attempted credits, so that the total reflected all coursework, regardless of whether a passing grade was earned in the course.

Tuition.

Tuition was used as an independent variable for this study. Tuition is a continuous variable that represents the total tuition charged each academic year. Tuition was charged at two different flat rates for students in their first year: one for full-time students and another for part-time students. After the first year tuition was charged at a per credit rate. Table 3.4 shows the tuition rates for each academic year included in this study. The range of values was $0 to $49,129. Tuition charges were automatically calculated in Banner based on a student's registration, status, and class level for a given semester. As expected, tuition was found to have a strong positive correlation between total credits and cost of attendance, so it was discarded from the model in order to prevent issues of multicollinearity.

Table 3.4

Midsize Law School Tuition

Academic Year	1st Year Full-time (flat rate)	1st Year Part-time (flat rate)	Continuing (per credit)
2008-2009	$35,416	$25,986	$1,135
2009-2010	$37,800	$27,750	$1,190
2010-2011	$39,690	$29,140	$1,240

Cost of attendance.

Cost of attendance (COA) was used as an independent variable in this study. Cost of attendance is a continuous variable and is sometimes referred to as a student budget. COA is an estimate of expenses that a student will incur to attend a postsecondary institution and it represents the maximum amount of financial aid that a student may

receive for a given academic year. Federal regulations require every institution that receives federal student aid funds through programs established under Title IV of the Higher Education Act (HEA) to determine students' cost of attendance. Cost of attendance may vary by student, according to such factors as student status (e.g., full or part-time), living situation (e.g., on-campus, off-campus, with parents), and tuition. COA includes direct costs, such as tuition and fees, and indirect costs such as room and board, transportation, and miscellaneous expenses.

Midsize Law School developed a standard cost of attendance every year based on student surveys, but also customized a COA for individual students in certain circumstances. The range of values for COA was $0 to $85,311. COA was calculated and entered in Banner as part of the financial aid awarding process.

Total non-loan aid.

Total non-loan aid, which is a combination of gift aid and federal work-study aid, was used as an independent variable for this study. Gift aid reflected the total of all grants or scholarships that a student receives in a given academic year. Institutional scholarships were awarded by the admissions committee as part of admissions process. These scholarships were entered in Banner, along with any other gift aid that a student received from other sources throughout the academic year. Federal work-study aid reflected the total amount of federal work-study that a student received in a given academic year. Federal work-study was awarded and entered in Banner by the financial aid office as part of financial aid awarding process. Gift aid and federal work-study aid were combined to create a continuous variable called total non-loan aid. These two data elements were combined because they both reduce the total loan amount a student is

eligible to borrow. In addition, very few students received federal work-study aid and the amounts were small, so it was not practical to keep federal work-study aid in the study as its own variable. The range of values for total non-loan aid was $0 to $47,800.

Initial loan amount offered.

Initial loan amount offered was used as an independent variable for this study. Initial loan amount offered is a continuous variable that represents the total amount of Perkins Loans, Subsidized Stafford Loans, Unsubsidized Stafford Loans, Graduate PLUS Loans, and private or alternative loans that were initially offered to a student in a given academic year. These offered amounts were entered in Banner by the financial aid office as part of financial aid awarding process. The range of possible values was $0 up to a student's cost of attendance. The practice for determining the amount offered changed between 2009-2010 and 2010-2011, as described earlier in this chapter.

Research Design

Research approach.

The design of this study is best described as quasi-experimental. Attempting to answer the research questions described above using a true experimental design would not have been practical or ethical. A true experimental design would have required the random selection of a control group and treatment group from a population of potential student loan borrowers. Obtaining consent from a law school to use members of its student body for such an experiment would be unlikely, given the ethical concerns involved with intentionally treating a subset of potential student borrowers in such a way that may have resulted in higher levels of loan borrowing. Instead, non-equivalent

groups were used to function as comparison groups. They are non-equivalent in that they were not randomly assigned, but they did possess similar characteristics.

Method of analysis.

This study utilized multiple regression as the primary method of analysis in determining the extent to which an institution's financial aid awarding practices and student demographics predicted the loan amount that law students borrowed. Multiple regression is used to relate a set of independent variables to a dependent variable for the purposes of explanation or prediction (Kelley & Maxwell, 2010). In this study it was used to explain the relationship between the independent and dependent variables.

Kelley and Maxwell (2010) describe a continuum of research approaches, with confirmatory research and explanatory research acting as anchors at each end, along which multiple regression may be applied. The research approach of this study is somewhere near the middle of the continuum described by Kelley and Maxwell (2010). This study used multiple regression to test the hypothesis that there is a positive relationship between initial loan amount offered and total amount borrowed, thereby representing a confirmatory approach. The independent variable of "initial amount offered" was theoretically justified and was used to test a well-defined research question and hypothesis. In contrast, the inclusion of demographic data as independent variables illustrates the exploratory side of the research approach. These numerous independent variables were explored to determine, which, if any, are helpful in predicting or explaining the amount students borrow.

Research question 1a.

What percent of variance in loan amount borrowed is explained by the overall model? This research question was answered by testing an overall model that used all of the independent variables described above, which are also depicted in Figure 3.1. This overall model was expected to predict a significant proportion of variance in the dependent variable, which is loan amount borrowed. Some of the independent variables that were included in the model were confounding variables, since it was expected that they were highly correlated with other independent variables and/or the dependent variable. They were included in the model in order to control for them. This allowed the predictive value of each independent variable, above and beyond all other independent variables in the model, to be determined.

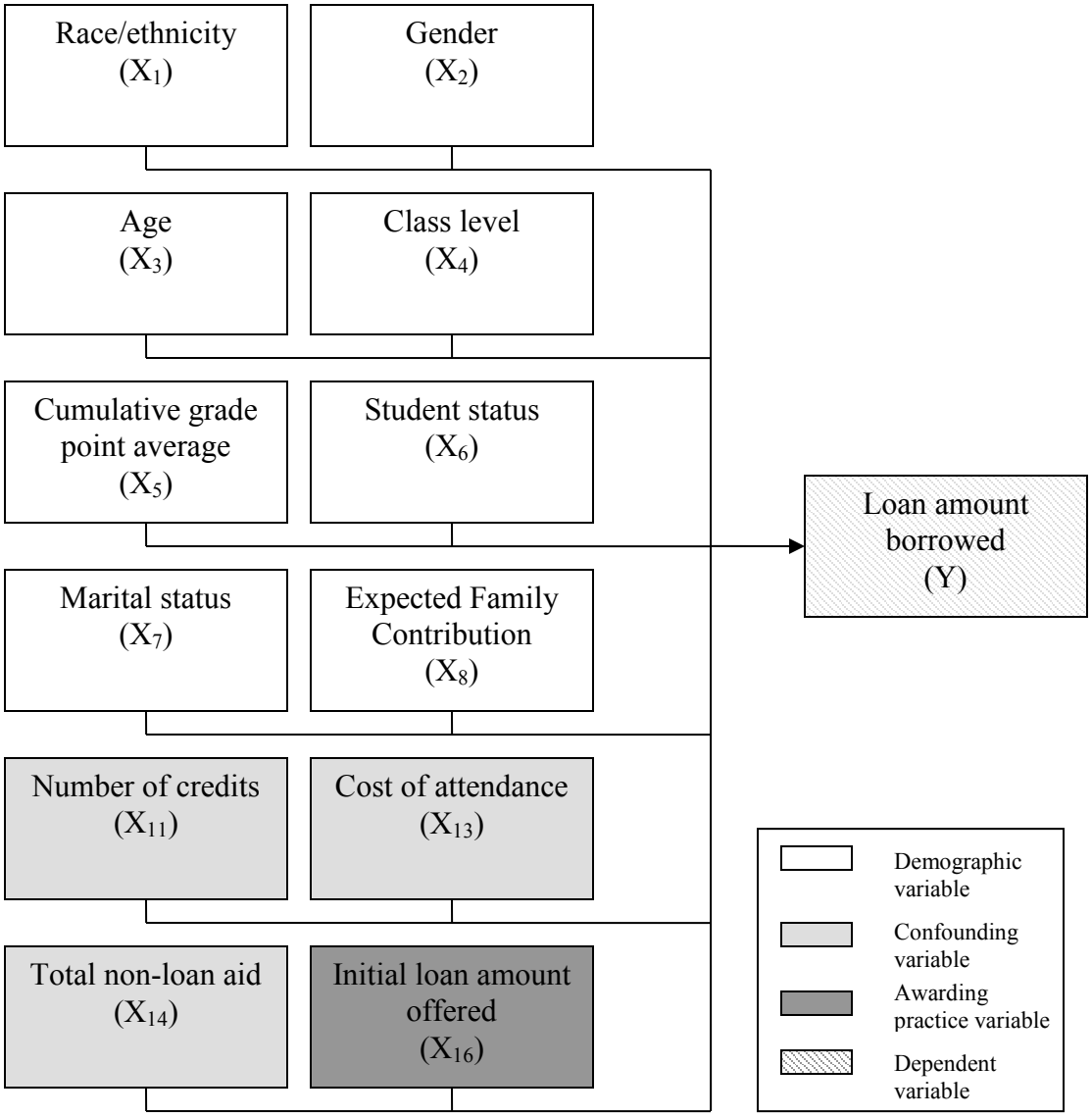

Figure 3.1. Overall model.

Research question 1b.

Which variables are significant predictors of loan amount borrowed while controlling for relations among other predictors in the overall model? This research question was answered using semi-partial correlations to determine the amount of variance predicted by each independent variable above and beyond all other independent variables. It was expected, based on prior research findings (e.g., Chambers, 1992), that

race/ethnicity and cumulative GPA would be identified as significant demographic predictors.

Research question 1c.

Does initial loan amount offered explain a significant percent of variance in loan amount borrowed above what is explained by the other predictors in the overall model? It was expected, based on the conceptual framework established in chapter 2, that initial loan amount offered would be identified as a significant predictor of total amount borrowed. In other words, it was expected that the overall model (see Figure 3.1) would explain a significantly greater percent of variance than a reduced model (see Figure 3.2) that did not include initial loan amount offered.

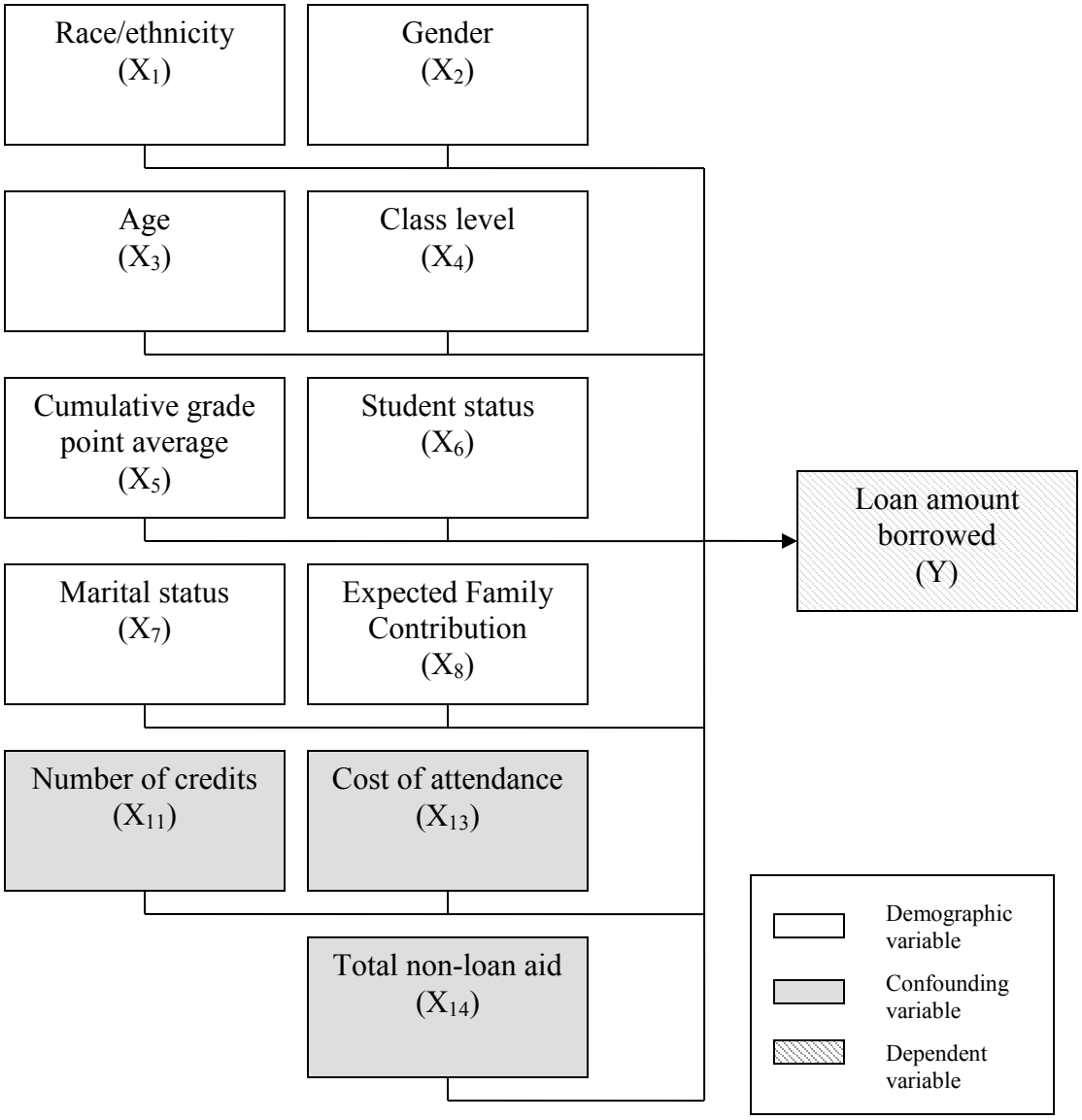

Figure 3.2. Reduced model.

The expected positive relationship between initial loan amount offered and loan amount borrowed is shown in Figure 3.3.

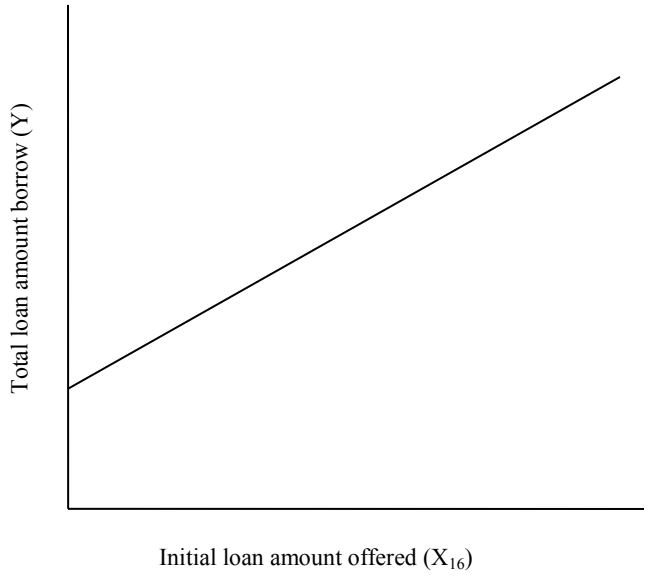

Figure 3.3. Expected relationship between initial loan amount offered and loan amount borrowed.

Research question 1d.

To what extent is the relationship between initial loan amount offered and loan amount borrowed different in 2008-2009 and 2009-2010 as compared to 2010-2011, given the change in loan awarding practices? The purpose of this research question was to determine whether the change in Midsize Law School's loan awarding practice between 2009-2010 and 2010-2011 resulted in a change in the relationship between initial loan amount offered and total amount borrowed. This research question was answered by determining whether the *b* values for initial loan amount offered were statistically significantly different in 2008-2009 and 2009-2010 as compared to 2010-2011. It was expected that the *b* values, which represent the number of dollars that the loan amount borrowed increases for every $1 increase in initial amount offered, would not be statistically significantly different (see Figure 3.4). This was expected because behavioral economic concepts like status quo bias suggest that students would more often

choose the default option, which in this study was represented by the variable of initial loan amount offered. Total amount borrowed in 2010-2011 was expected to be higher than in 2008-2009 and 2009-2010 due to the change in Midsize Law School's loan awarding practice, but the relationship between initial loan amount offered and loan amount borrowed was not expected to be significantly different.

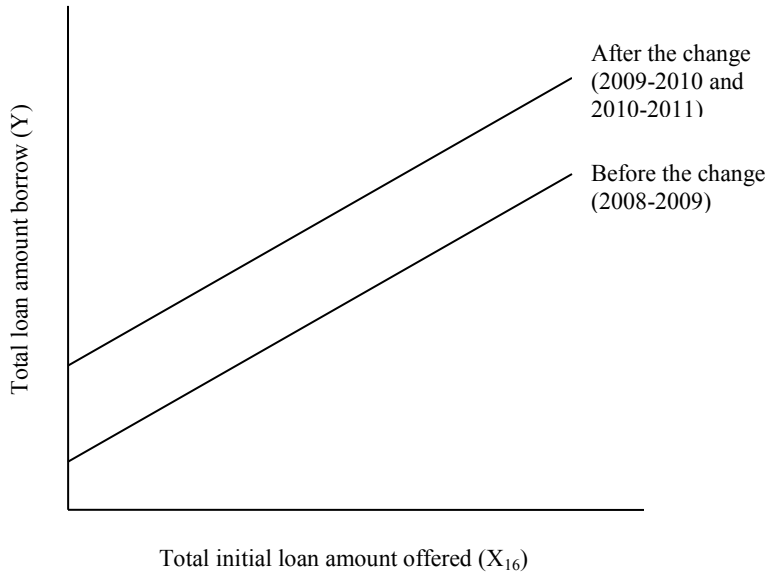

Figure 3.4. Expected relationship between initial loan amount offered and loan amount borrowed before and after Midsize Law School's change in loan awarding practice.

Research question 1e.

What percent of variance in loan amount borrowed is explained by initial loan amount offered, student status, and the interaction between initial loan amount offered and student status? This research question was answered by testing the interaction between initial loan amount offered and student status. While a positive relation between initial loan amount offered and loan amount borrowed was expected, it was also expected that the relationship would be more positive for full-time students (see Figure 3.5).

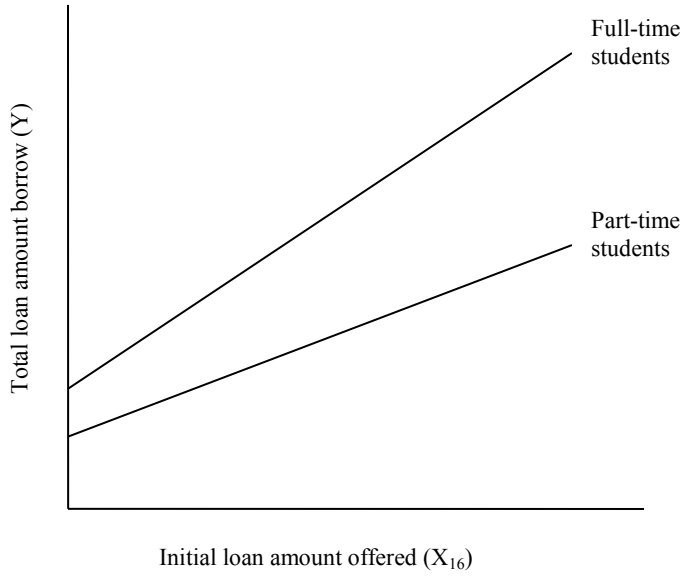

Figure 3.5. Expected relationship between initial loan amount offered and loan amount borrowed for full- and part-time students.

Research question 1f.

What percent of variance in loan amount borrowed is explained by initial loan amount offered, class level, and the interaction between initial loan amount offered and class level? This research question was answered by testing the interaction between initial loan amount offered and class level. While a positive relation between initial loan amount offered and loan amount borrowed was expected, it was also expected that the relationship would be more positive for first-year students (see Figure 3.6).

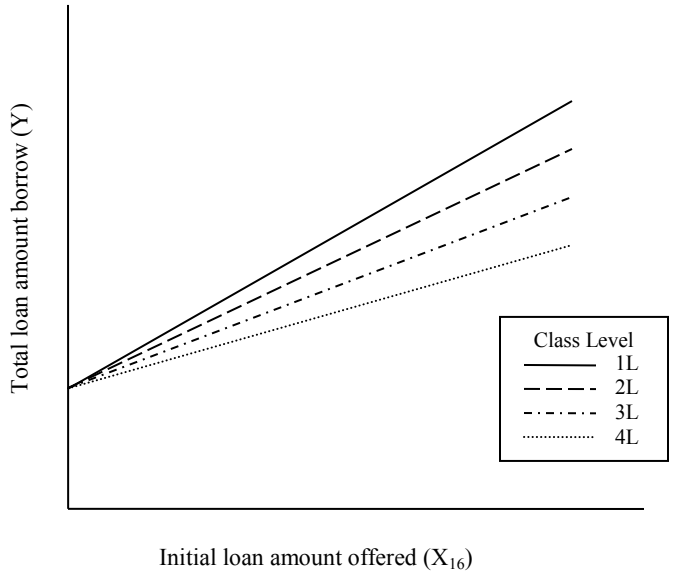

Figure 3.6. Expected relationship between initial loan amount offered and loan amount borrowed by class level.

Procedures

Data collection, preparation and management.

The secondary dataset that was used in this study was obtained from Banner, Midsize Law School's student information system. Banner houses all student enrollment records, including data from a variety of primary sources, such as the admissions application, the Free Application for Federal Student Aid, and other institutional sources.

Permission was received from Midsize Law School in June 2011 to access this dataset. Once an exemption was received from The George Washington University Institutional Review Board (IRB), the data was obtained from Midsize Law School. Midsize Law School coded each student record in the dataset with a dummy identifier so as to protect student privacy. No other personal identifier, such as Social Security number or student identification number, was used. The data was saved to a portable

drive in a password protected file and that drive will be destroyed approximately one year after the completion of this study.

Data was prepared for analysis in several ways. The values for nominal variables were dummy-coded to facilitate data analysis and interpretation. Dummy coding was used to compare groups to each other, rather than using effect coding to compare them to the grand mean. Dummy coding is preferred in cases such as this where the *n* for each group is different, since it does not require weighting. Values for several independent variables, such as non-loan aid and initial loan amount offered, were calculated using the raw data provided by Midsize Law School.

Human subjects statement.

This study posed no risk to participants. Secondary data was used, so no treatment was administered to participants. The privacy of participants was protected by the use of dummy identifiers. No personally-identifiable information was released to the researcher, other third parties, or the general public. The name of the institution has also been masked to protect the privacy of participants.

Statistical analyses.

Once the data was prepared, the assumptions of multiple regression were tested. Assumptions testing and data analysis was performed using version 22 of IBM SPSS Statistics, a computer software package used for statistical analysis. For all research questions statistical significance was determined at the level of $\alpha = 0.05$.

Assumptions testing.

Prior to performing regression analysis, the assumptions of multiple regression were tested. This included testing for multicollinearity, independence of observations, linearity, homoscedasticity, and normal distribution.

Multicollinearity.

One assumption of multiple regression is that independent variables are not highly correlated with one another. When two or more independent variables are highly correlated multicollinearity exists, which makes it difficult to quantify and understand the variance explained by each independent variable. To test for multicollinearity, correlations among the independent variables were examined. While relationships between independent variables are expected, according to Cohen (1988) Pearson's *r* correlation coefficients greater than .70 suggest a very strong relationship between variables. Table 3.5 shows the correlations among all independent variables in the model.

Table 3.5

Correlation Matrix

	Asian	Black	Hisp.	Hawaii	Unk.	Gender	Age	Married	House	Income	EFC	COA	Level	Status	GPA	Offered	Tuition	Credits	Non-loan
Asian	1																		
Black	**-.067**	1																	
Hispanic	**-.067**	**-.062**	1																
Hawaiian	-.041	-.038	-.038	1															
Unk.	**-.090**	**-.084**	**-.084**	**-.051**	1														
Gender	**.068**	**.085**	**.050**	**.045**	-.004	1													
Age	.038	**.137**	-.033	-.016	-.014	**-.064**	1												
Married	-.012	.024	.007	**.050**	.002	**-.049**	**.379**	1											
House	.008	**.089**	-.005	.004	-.003	-.034	**.433**	**.752**	1										
Income	-.013	**.046**	-.016	.016	-.023	-.038	**.545**	**.545**	**.492**	1									
EFC	-.015	.016	-.025	.007	-.020	-.013	**.442**	**.392**	**.279**	**.849**	1								
COA	-.033	.026	.027	**.043**	.028	-.006	**-.241**	**-.160**	**-.119**	**-.137**	**-.117**	1							
Level	.012	.010	**-.055**	-.035	-.038	.010	**.281**	**.148**	**.110**	.025	.008	**-.632**	1						
Status	.035	.017	.011	.012	-.006	-.004	**.306**	**.180**	**.190**	**.402**	**.346**	**-.316**	**.066**	1					
GPA	**-.089**	**-.218**	**-.088**	**-.057**	.025	-.027	-.023	.011	-.032	**-.056**	-.030	**-.115**	**.267**	**-.146**	1				
Offered	.019	**-.067**	**-.049**	.019	.007	-.013	**-.128**	**-.116**	**-.094**	**-.134**	**-.117**	**.254**	**-.087**	**-.197**	-.025	1			
Tuition	-.027	-.008	.024	.023	.009	**-.045**	**-.298**	**-.171**	**-.155**	**-.244**	**-.210**	**.724**	**-.477**	**-.558**	.011	**.377**	1		
Credits	-.024	-.012	.007	.010	.002	-.034	**-.310**	**-.175**	**-.163**	**-.260**	**-.216**	**.664**	**-.431**	**-.587**	.028	**.306**	**.935**	1	
Non-loan	**-.100**	**.130**	**.183**	-.028	.021	.036	**-.114**	-.026	-.035	**-.079**	**-.077**	**.296**	**-.276**	**-.249**	**.229**	**-.311**	**.317**	**.295**	1

Note. Race was analyzed using dummy codes, with White as the reference group. Correlations in bold are significant at the .05 level (2-tailed). Unk. = unknown race; House = household income; EFC = Expected Family Contribution; COA = cost of attendance; GPA = grade point average; Non-loan = non-loan aid.

Several cases of very strong relationships between variables were identified. First, there was a strong positive correlation between being married and household size, $r(2313) = .752$, $p < .001$. In other words, married students were more likely to have larger households. To resolve the issue of multicollinearity, the household size variable was discarded from the model. Household size is used in calculating expected family contribution, so to some degree this data element was represented in another independent variable. Marital status was kept in the model because it is not represented in any other independent variables in the model (only indirectly through increased household size, which is factored into EFC) and because of the potential that a married law student may have a working spouse, resulting in potentially higher income. For this reason, one might expect that marital status would be a significant predictor of loan amount borrowed.

There was also a strong positive relation between expected family contribution (EFC) and income, $r(2313) = .849$, $p < .001$. In other words, as income increased EFC also increased. This strong relation makes sense given the formula used to calculate EFC. Though income is not the only data element used in the federal formula for determining EFC, income is weighted heavily, since it is expected that families with higher incomes are be able to contribute more to education costs. To resolve the issue of multicollinearity, the income variable was discarded from the model. Income is used in calculating EFC, so to some degree this data element was represented in another independent variable. EFC was retained in the model because it is intended to serve as a representation of a student's ability to pay for educational expenses, so one would expect EFC would be a significant predictor of loan amount borrowed.

Total tuition was strongly correlated with both total credits and cost of attendance (COA). There was a strong positive correlation between total tuition and total credits, $r(2313) = .935$, $p < .001$. This strong relation was expected given that tuition is determined by Midsize Law School using a combination of class level and the number of credits. Likewise, there was a strong positive relation between total tuition and COA, $r(2313) = .724$, $p < .001$. This was also expected, since tuition is the largest single factor used in calculating COA. To resolve these two issues of multicollinearity, the total tuition variable was discarded from the model. Since tuition is used in calculating COA, to some degree this data element was already represented in another independent variable.

Independence of observations.

A second assumption of linear regression is that there is independence of observations, also known as independence of residuals. This assumption is violated when there is a subset or subsets of cases where the observations for that subset are clustered or linked (Cohen, Cohen, West, & Aiken, 2003). To meet this assumption the observations must be independent of one another.

On the surface it may seem that the fact that some individual borrowers appeared more than once in the dataset, perhaps as much as three times if they were enrolled and borrowed loans during all three academic years examined, would violate the assumption of independence of observations. Cohen, Cohen, West, and Aiken (2003) describe the potential problem of serial dependency, which can occur when "data are repeatedly collected from a single individual or the same sample of individuals over time" (p. 134). This problem can be seen in some time series experiments, where an observation at one

point in time may be linked to a prior or future observation. In this study, serial dependency does not exist because the total amount borrowed in any one year is not generally linked to the amount offered or borrowed in a prior year, even for the same student. Each year is treated separately for financial aid awarding purposes, and each year there may be substantial variability in the values of the independent variables for each student. For example, a student's EFC often varies from year to year, as well may other variables, such as marital status, cumulative GPA, and number of credits.

In addition to these intuitive, theory-based reasons that help to explain why independence of observations existed in this dataset, the Durbin-Watson test was conducted using SPSS to test for independence of observations. According to Cohen et al. (2003) a Durbin-Watson statistic close to 2.0 suggests independence of observations. In this dataset there appeared to be independence of observations, as assessed by a Durbin-Watson statistic of 1.894.

Linearity.

A third assumption of multiple regression is that there are linear relations between the independent and dependent variables. This assumption was tested by visually examining scatter plots of the relation between each independent variable and the dependent variable, which is loan amount borrowed. For example, Figure 3.7 shows that there was a linear relation between initial loan amount offered and loan amount borrowed.

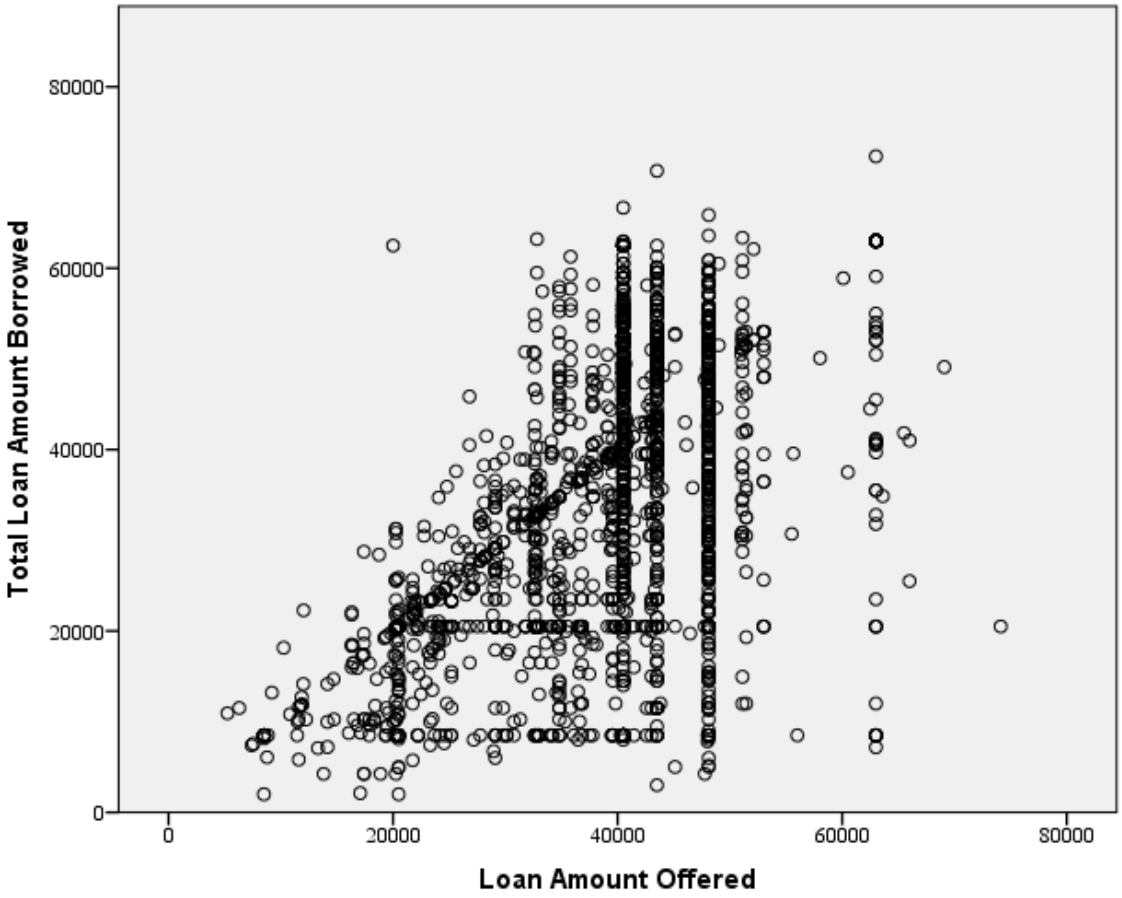

Figure 3.7. Relation between initial loan amount offered and loan amount borrowed.

Homoscedasticity.

A fourth assumption of multiple regression is that there is a constant variance of residuals, also known as homoscedasticity. In other words, for any given value of *X*, "the conditional variance of the residuals around the regression line in the population is assumed to be constant" (Cohen et al., p. 119). Conditional variance refers to the "variability of the residuals around the predicted value" (Cohen et al., p. 119). This assumption was tested by visually examining a scatter plot of the residuals. Figure 3.8 shows that there was some heterogeneity of variance at higher values of *X*, suggesting heteroscedasticity. The fact that there was greater heterogeneity of variance at higher

values of *X* means that the amount of error is larger at higher values of *X* and therefore, a single regression equation is not sufficient for all values of *X*.

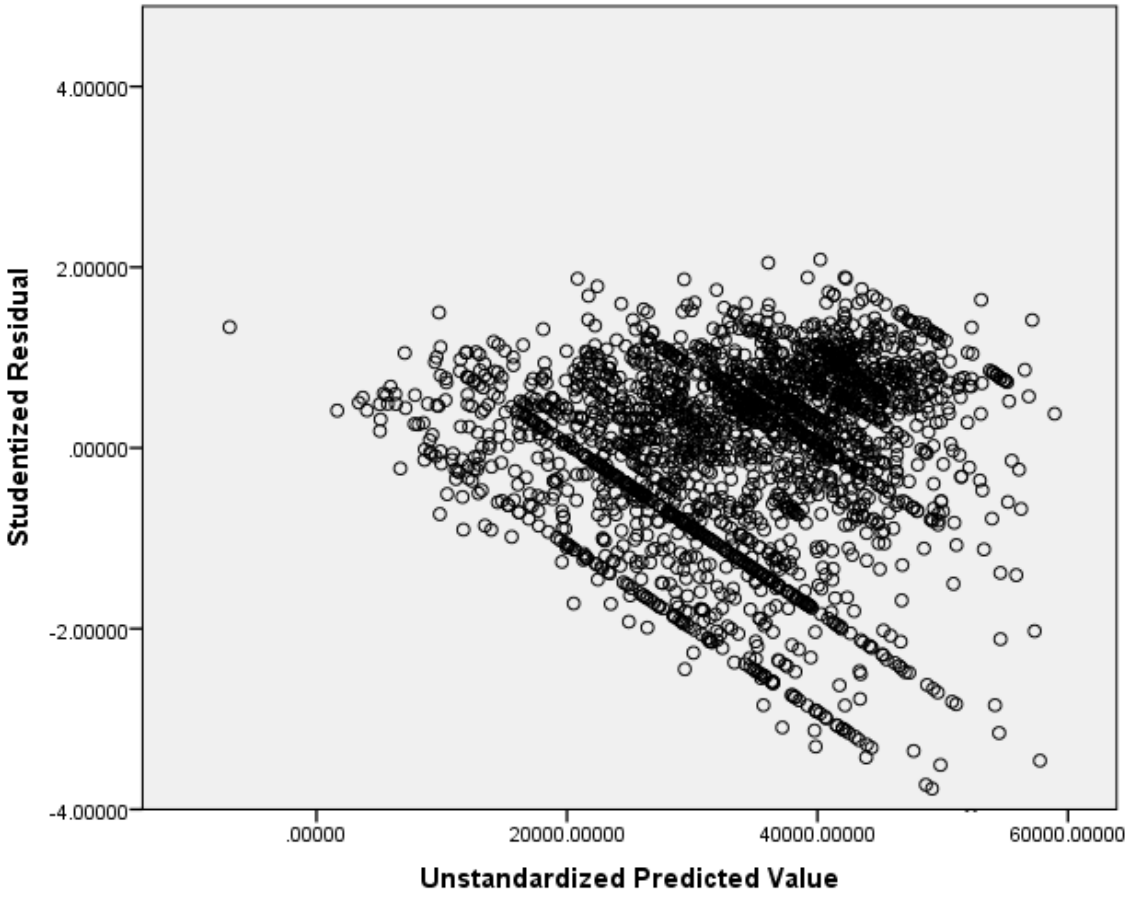

Figure 3.8. Scatter plot of residuals.

To address this issue of heteroscedasticity the *Y* values could have been transformed by changing the scale or units in order to achieve homoscedasticity. However, performing a transformation of the data would have necessarily changed the meaning of the scale and resulted in different *b* values. For these reasons, which are explored further in Chapter 5, the data was not transformed and analysis was conducted despite this assumption having not been met.

Normality of residuals.

Finally, a fifth assumption of multiple regression is normality of residuals. This refers to the expectation that the observations will be normally distributed. This assumption can be tested by visually inspecting a histogram. The histogram shown in Figure 3.9 suggested a mostly normal curve. The curve is slightly negatively skewed, which is not surprising given the ceiling on loan amount borrowed imposed by the cost of attendance.

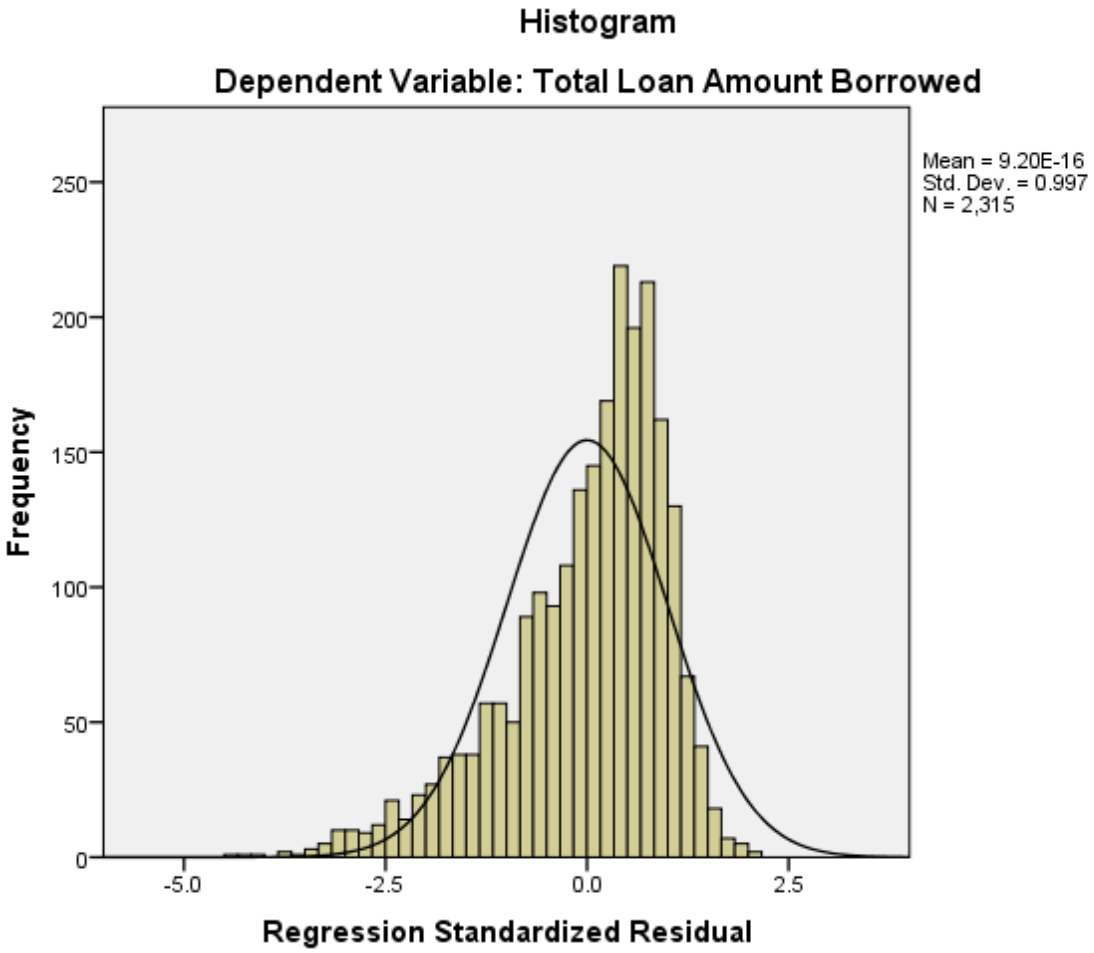

Figure 3.9. Histogram of loan amount borrowed.

After removing household size, income, and total tuition from the model to resolve problems of multicollinearity, it was determined that the assumptions of multiple

regression had largely been met, with the exception of assumption of homoscedasticity, and the regression analysis could proceed.

Chapter IV: Results

The purpose of this study was to determine whether institutional awarding practices and student demographic variables predict the amount that law students borrow. This chapter includes the results of the data analysis conducted for each research question, followed by a summary.

Research Question 1a: Overall Model

Research question 1a asked, "what percent of variance in loan amount borrowed is explained by the overall model?" Together, the sixteen independent variables in the overall model explained a statistically significant proportion of variance in loan amount borrowed, $F(16, 2298) = 125.692$, $p < .001$, $R^2 = .467$. In other words, the overall model explained 46.7 percent of variance in loan amount borrowed.

Research Question 1b: Individual Predictors

Research question 1b asked, "which variables are significant predictors of loan amount borrowed while controlling for relations among other predictors in the overall model?" The results for each independent variable, with the exception of initial loan amount offered, are described below. Initial loan amount offered will be addressed in research question 1c. Table 4.1 shows the unstandardized and standardized coefficients, *t* statistics and semipartial correlations for each independent variable.

Table 4.1

Summary of Multiple Regression Analysis Predicting Loan Amount borrowed

Variable	Unstandardized Coefficients		Standardized Coefficients			
	b	SE	Beta	t	*p*	sr^2
Asian	-2417.72	922.31	-.04	-2.62	.009	.00
Black	1725.79	1047.93	.03	1.65	.100	.00
Hispanic/Latino	1052.90	1006.36	.02	1.05	.296	.00
Native Hawaiian	-1359.66	1534.72	-.01	-.89	.376	.00
Unknown race	-265.39	757.33	-.01	-.35	.726	.00
Female	-356.89	458.03	-.01	-.78	.436	.00
Age	269.92	65.79	.08	4.10	.000	.00
Married	-1433.36	710.70	-.04	-2.02	.044	.00
Expected Family Contribution, *dollars*	-.07	.02	-.07	-3.59	.000	.00
Cost of attendance, *dollars*	.42	.03	.34	13.90	.000	.04
Class level	1907.28	364.50	.12	5.23	.000	.01
Part-time status	-4485.09	789.29	-.12	-5.68	.000	.01
Cumulative GPA	-654.43	703.45	-.02	-.93	.352	.00
Total non-loan aid, *dollars*	-.62	.03	-.48	-23.23	.000	.13
Total credits	394.31	72.90	.14	5.41	.000	.01

Note. White was the reference group for all dummy variables for race. Male was the reference group for the gender dummy variable.

Race.

There were five dummy variables for race included in the overall model: Black, Asian, Hispanic/Latino, Native Hawaiian/Pacific Islander and unknown, with White as the reference group. The only race variable that was a statistically significant predictor of loan amount borrowed was Asian.

Loan amount borrowed by Asian students was significantly lower than that of other students, above and beyond all other variables in the overall model, $t(2298) = -2.621$, $p = .009$, $sr^2 = .002$. The Asian dummy variable explained 0.3 percent of the

variance in loan amount borrowed holding all other variables in the overall model constant. The Asian dummy variable explained 0.2 percent of the variance in loan amount borrowed given that all the other variables were in the model.

No other race variables were statistically significant predictors of total amount borrowed, $p > .05$, $sr^2 < .001$ (see Table 4.2). In other words, the total amount borrowed by Black students, Hispanic/Latino students, Native Hawaiian students, or students of unknown race was not significantly different than that of the reference group, which was White students.

Gender.

A dummy variable was used to determine whether gender was a significant predictor of loan amount borrowed. Male students were coded as 0 and female students were coded as 1. The results indicated that total amount borrowed by female students was not significantly different than that of male students, above and beyond all other variables in the overall model, $t(2298) = -.779$, $p = .436$, $sr^2 < .000$. The female dummy variable explained zero percent of the variance in loan amount borrowed holding all other variables in the overall model constant. The female dummy variable explained zero percent of the variance in loan amount borrowed given that all the other variables were in the model.

Age.

Age was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = 4.102$, $p < .001$, $sr^2 = .004$. Age explained 0.7 percent of the variance in loan amount borrowed holding all other variables

in the overall model constant. Age explained 0.4 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Marital status.

A dummy variable was used to determine whether marital status was a significant predictor of loan amount borrowed. Students who reported as single, separated, or divorced/widowed were coded as 0 and students who reported as being married were coded as 1. Loan amount borrowed by married students was significantly lower than that of unmarried students, above and beyond all other variables in the overall model, $t(2298) = -2.017$, $p = .044$, $sr^2 = .001$. Marital status explained 0.2 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. Marital status explained 0.1 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Expected family contribution.

Expected family contribution (EFC) was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = -3.586$, $p < .001$, $sr^2 = .003$. EFC explained 0.6 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. EFC explained 0.3 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Cost of attendance.

Cost of attendance was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = 13.895$, $p < .001$, $sr^2 = .045$. Cost of attendance explained 7.7 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. Cost of attendance explained

4.5 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Class level.

Class level was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = 5.233$, $p < .001$, $sr^2 = .006$. Class level explained 1.2 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. Class level explained 0.6 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Student status.

A dummy variable was used to determine whether student status was a significant predictor of loan amount borrowed. Full-time students were coded as 0 and part-time students were coded as 1. Part-time status was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = -5.682$, $p < .001$, $sr^2 = .008$. Part-time status explained 1.4 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. Part-time status explained 0.8 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Cumulative grade point average.

Cumulative grade point average (GPA) was not a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = -.930$, $p = .352$, $sr^2 < .001$. Cumulative GPA explained zero percent of the variance in loan amount borrowed holding all other variables in the overall model constant.

Cumulative GPA explained zero percent of the variance in loan amount borrowed given that all the other variables were in the model.

Total non-loan aid.

Total non-loan aid was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = -23.227$, $p < .001$, $sr^2 = .125$. Total non-loan aid explained 19 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. Total non-loan aid explained 12.5 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Total credits.

Total credits was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = 5.409$, $p < .001$, $sr^2 = .007$. Total credits explained 1.3 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. Total credits explained 0.1 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Summary.

Asian race, age, marital status, expected family contribution (EFC), cost of attendance, class level, student status, total credits, and total non-loan aid were significant predictors of loan amount borrowed. Of these significant predictors, cost of attendance and total non-loan aid explained the largest percent of variance in loan amount borrowed holding all other variables in the model constant.

Research Question 1c: Initial Loan Amount Offered

Research question 1c asked, "does initial loan amount offered explain a significant percent of variance in loan amount borrowed above what is explained by the other predictors in the overall model?" Initial loan amount offered was a significant predictor of loan amount borrowed above and beyond all other variables in the overall model, $t(2298) = 11.449$, $p < .001$, $sr^2 = .030$. Initial loan amount offered explained 5.4 percent of the variance in loan amount borrowed holding all other variables in the overall model constant. Initial loan amount offered explained 3 percent of the variance in loan amount borrowed given that all the other variables were in the model.

Research Question 1d: Comparison of Initial Loan Amount Offered Under Different Awarding Methods

Research question 1d asked, "is there a significant difference in the relation between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010 as compared to 2010-2011, given the change in loan awarding practices?" To answer this question, the relation between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010 was determined. These two years of data were combined into one sample because Midsize Law School used the same loan awarding practice during those two years. Then, the relation between initial loan amount offered and initial loan amount offered in 2010-2011 was determined, since that was the first year Midsize Law School implemented a new loan awarding practice. Finally, the Fisher's Z transformation was performed in order to determine whether the correlations in the two separate samples were significantly different.

Loan amount borrowed was correlated with initial loan amount offered under the old awarding method (academic years 2008-2009 and 2009-2010 combined), $r(1548) =$

.525, $p < .001$, and under the new awarding method (academic year 2010-2011), $r(767) = .491$, $p < .001$. Figure 4.1 shows the linear relation between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010 combined.

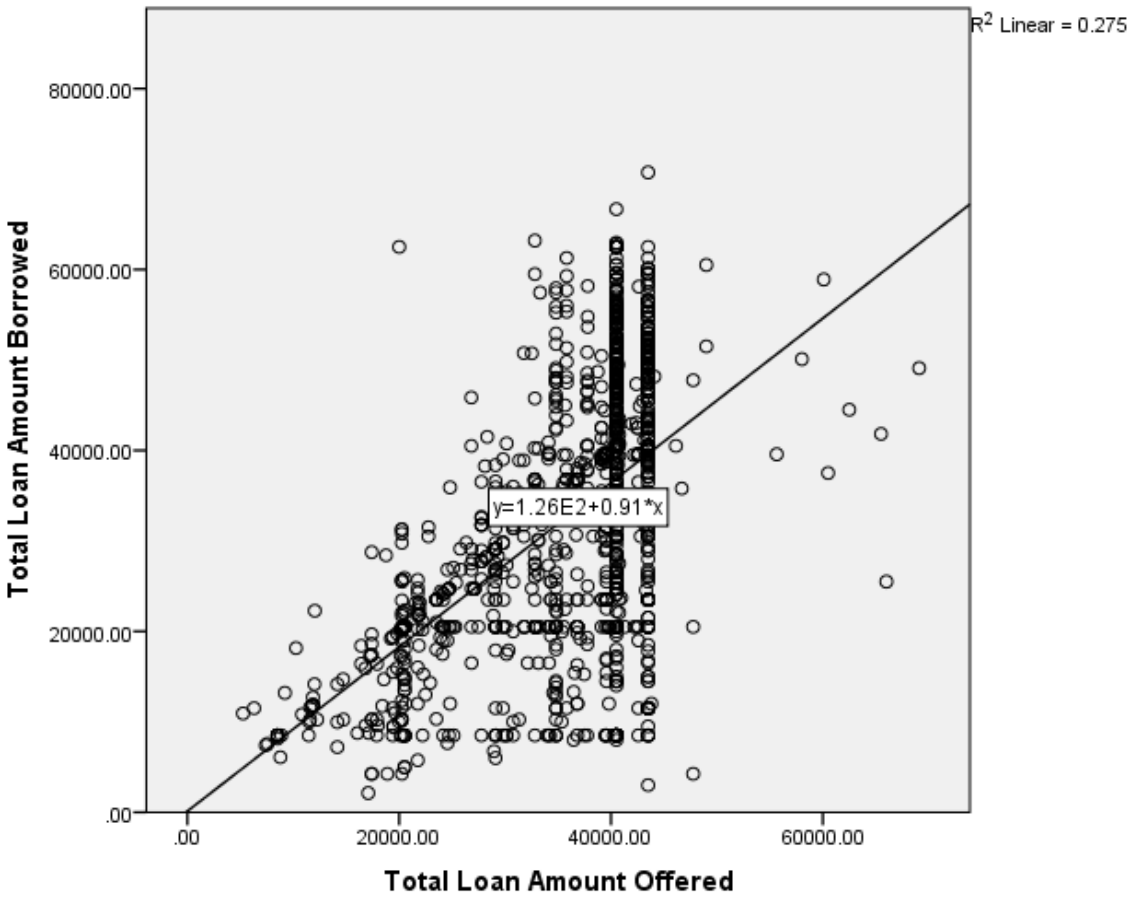

Figure 4.1. Relation between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010.

Figure 4.2 shows the linear relation between initial loan amount offered and loan amount borrowed in 2010-2011.

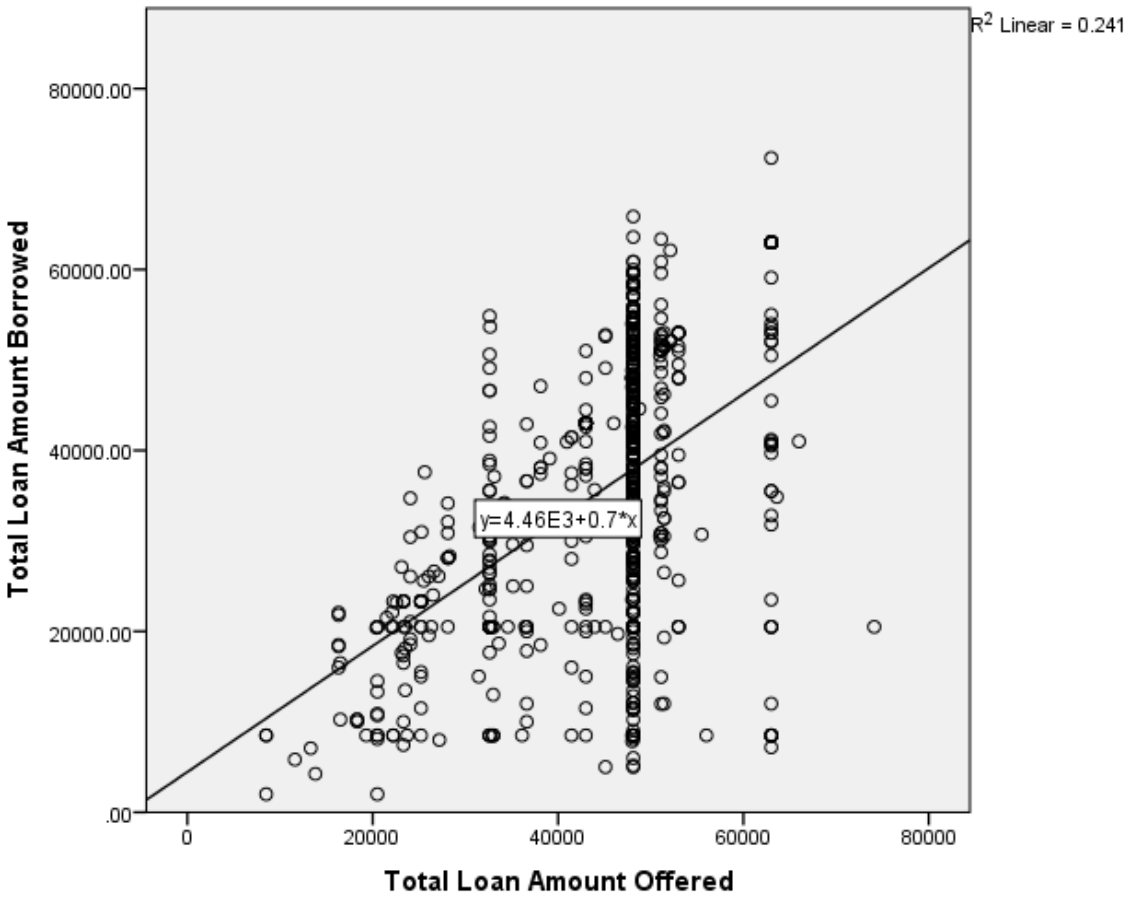

Figure 4.2. Relation between initial loan amount offered and loan amount borrowed in 2010-2011.

The Fisher's Z test was used to determine that the difference between these correlations was not statistically significant, Z = 1.04, p = .298. In other words, there was no significant difference in the relation between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010 combined as compared to 2010-2011. A Cohen's q value of .046 indicates that the effect size of the relation between the two samples was weak (Cohen, 1988).

Research Question 1e: Interaction between Initial Loan Amount Offered and Student Status

Research question 1e asked, "what percent of variance in loan amount borrowed is explained by initial loan amount offered, student status, and the interaction between initial loan amount offered and student status?" Student status refers to full- or part-time enrollment status, with full-time students coded as 0 and part-time students coded as 1. To answer the question, three nested hierarchical models were analyzed. The first model included one independent variable: initial loan amount offered. The second model included two independent variables: initial loan amount offered and student status. The third model included three independent variables: initial loan amount offered, student status, and the interaction between initial loan amount offered and student status. Figure 4.3 show the models that were tested.

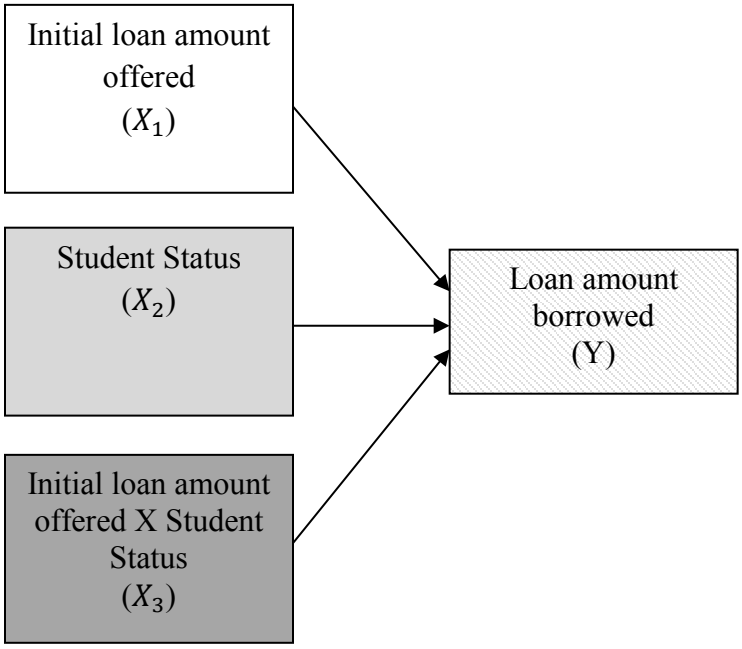

Figure 4.3. Nested models: Initial loan amount offered, Student Status, and the Interaction between Initial loan amount offered and student status. Model 1 included only the X_1 variable. One additional variable was added at each step.

The three models were compared to determine which model explained significantly more variance in loan amount borrowed. Table 4.2 shows the results for each model.

Table 4.2

Comparison of Nested Models: Initial loan Amount Offered, Status, and the Interaction between Initial Loan Amount Offered and Status

Model	df	p	R^2	ΔR^2	ΔF^2
1	2313	.000	.246	.246	754.581*
2	2312	.000	.262	.016	49.690*
3	2311	.172	.262	.001	1.865

Note. The results for Model 2 reflect the comparison of Model 2 and Model 1. The results for Model 3 reflect the comparison of Model 3 and Model 2.
*$p < .05$

As the results in Table 4.2 show, initial loan amount offered explained a statistically significant proportion of variance in loan amount borrowed, F(1,2313) = 754.581, $p < .001$, $R^2 = .246$. In other words, Model 1 explained 24.6 percent of variance in loan amount borrowed. Model 2 explained statistically significant more variance in loan amount borrowed than the Model 1, F(1,2312) = 49.690, $p < .001$, $R^2{}_{change} = .016$. Model 2 explained 1.6 percent more variance in loan amount borrowed than Model 1. Model 3 did not explain statistically significant more variance in loan amount borrowed than Model 2, F(1,2311) = 1.865, $p = .172$, $R^2{}_{change} = .001$. Model 3 explained 0.1 percent more variance in loan amount borrowed than Model 2.

Research Question 1f: Interaction between Initial Loan Amount Offered and Class Level

Research question 1f asked, "what percent of variance in loan amount borrowed is explained by initial loan amount offered, class level, and the interaction between initial

loan amount offered and class level?" To answer the question, three models were analyzed. The first model included one independent variable: initial loan amount offered. The second model included two independent variables: initial loan amount offered and class level. The third model included three independent variables: initial loan amount offered, class level, and the interaction between initial loan amount offered and class level. Figure 4.4 shows the models that were tested.

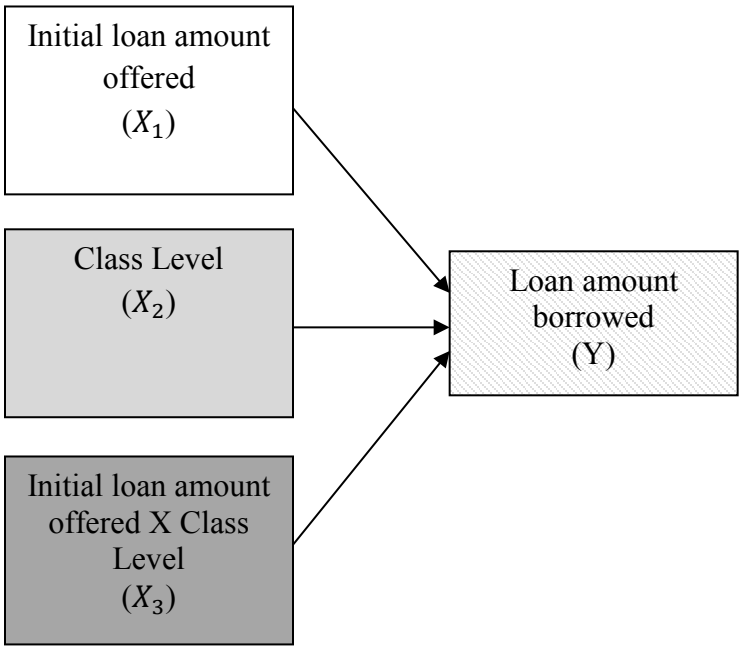

Figure 4.4. Nested models: Initial loan amount offered, class level, and the interaction between initial loan amount offered and class level. Model 1 included only the X_1 variable. One additional variable was added at each step.

The three models were compared to determine which model explained significantly more variance in loan amount borrowed. Table 4.3 shows the results for each model.

Table 4.3

Comparison of Nested Models: Initial Loan Amount Offered, Class Level, and the Interaction between Initial Loan Amount Offered and Class Level

Model	df	p	R^2	ΔR^2	ΔF^2
1	2313	.000	.246	.246	754.581*
2	2312	.742	.246	.000	.108
3	2311	.112	.247	.001	2.532

Note. The results for Model 2 reflect the comparison of Model 2 and Model 1. The results for Model 3 reflect the comparison of Model 3 and Model 2.
*$p < .05$

As the results in Table 4.3 show, initial loan amount offered explained a statistically significant proportion of variance in loan amount borrowed, F(1,2313) = 754.581, $p < .001$, $R^2 = .246$. In other words, Model 1 explained 24.6 percent of variance in loan amount borrowed. Model 2 did not explain statistically significant more variance in loan amount borrowed than the Model 1, F(1,2312) = .108, $p = .742$, $R^2_{change} < .001$. Model 2 explained percent more variance in loan amount borrowed than Model 1. Model 3 did not explained statistically significant more variance in loan amount borrowed than Model 2, F(1,2311) = 2.532, $p = .112$, $R^2_{change} = .001$. Model 3 explained 0.1 percent more variance in loan amount borrowed than Model 2.

Conclusion

After testing the assumptions of multiple regression, it was determined that the assumptions had been met and the analysis could proceed. The results revealed several key findings. First, it was found that together, the sixteen predictors in the overall model explained a statistically significant proportion (46.7 percent) of variance in loan amount borrowed. Second, it was found that Asian race, age, marital status, expected family contribution (EFC), cost of attendance, class level, student status, total credits, and total

non-loan aid were significant predictors of loan amount borrowed. Of these significant predictors, cost of attendance and total non-loan aid explained the largest percent of variance in loan amount borrowed holding all other variables in the model constant. Third, it was found that initial loan amount offered was a statistically significant predictor of loan amount borrowed. It explained 5.4 percent of the variance in loan amount borrowed holding all other variables in the overall model constant, and it explained 3 percent of the variance in loan amount borrowed given that all the other variables were in the model. Fourth, there was no statistically significant difference in the relation between initial loan amount offered and loan amount borrowed in 2008-2009 and 2009-2010 as compared to 2010-2011. Fifth, it was found that together, initial loan amount offered and part-time status explained significantly more variance in loan amount borrowed than initial loan amount offered alone. Finally, neither initial loan amount offered and class level, nor initial loan amount offered, class level, and the intersection of initial loan amount offered and class level, explained significantly more variance in loan amount borrowed than initial loan amount offered alone. The implications of these findings will be discussed in the next chapter.

Chapter V: Conclusion

The purpose of this study was to determine whether institutional awarding practices and other variables predict the amount that law students borrow. The research findings were presented in Chapter 4. This chapter begins with an interpretation of the findings for each research question, which is then followed by a description of the limitations of the present study, implications for theory, recommendations for practice, recommendations for future study, and conclusions.

Interpretation of Findings

Together, the sixteen independent variables in the overall model explained 46.7 percent of variance in loan amount borrowed. Though they explained a statistically significant proportion of variance in loan amount borrowed, it's important to note that this finding means that more than half of the variance in loan amount borrowed cannot be explained by the variables in the model, suggesting that other variables have a substantial effect on amount borrowed. Some other variables that presumably have an effect on amount borrowed may be difficult to measure or obtain and were not included as variables in this study, such as willingness to borrow and financial support from the borrower's parents.

Race.

The literature suggested that race is a significant predictor of the amount of student loans borrowed (Chambers, 1992; Price, 2004; Baum & Steele, 2010). Baum and Steele (2010) found that a higher percentage of Black and Hispanic/Latino students borrowed student loans to pay for their undergraduate education and higher percentages of these students borrowed at higher levels, when compared to White students.

Conversely, Baum and Steele (2010) found that a lower percentage of Asian students borrowed and lower percentages of Asian students borrowed at lower levels, when compared to White students. The findings of the present study, based on descriptive statistics, suggested that, when compared to White students, there would be a statistically significant positive relationship between race and amount of student loans borrowed for Black and Hispanic/Latino students, and a statistically significant negative relationship between race and amount of student loans borrowed for Asian students.

The findings of this study are not consistent with the findings of Baum and Steele (2010). For Asian students race was found to be a significant predictor of amount of student loans borrowed. However, the effect size was very small, suggesting a weak negative relationship between race and amount borrowed. The Asian dummy variable explained only 0.2 percent of the variance in loan amount borrowed given all other variables in the model. For all other racial groups, including Black, Hispanic/Latino, Native Hawaiian, and unknown, race was not a significant predictor of the amount borrowed.

Though these findings appear to conflict with the literature, on closer examination the discrepancy may be explained by considering differences in the student populations studied and the methodologies of each study. First, Baum and Steele (2010) and other studies that have found a significant relationship between race and amount borrowed studied undergraduate student populations, not law student populations. This major difference in the populations studied may contribute to the explanation of these seemingly contradictory findings. One might assume that students who self-select into the law student population have a certain comfort level with taking on student debt,

regardless of race. Other "moderating influences" that Goldrick-Rab et al. (2009) identified as contributing to the context in which financial aid has an effect on outcomes, such as sensitivity to time horizon, risk aversion, and work preferences, may also be quite different for students making borrowing decisions at the undergraduate and graduate levels. For example, since full-time law students are discouraged from working in their first year of law school and are not permitted to work more than 20 hours when enrolled full-time, work preferences, which may differ according to socioeconomic status and race, may not come into play to the same extent that they do at the undergraduate level.

In addition, it's possible that expectations regarding degree completion and future earnings may differ less according to race and socioeconomic status at the graduate level. Black and Hispanic/Latino students may be more pessimistic than their White peers at the undergraduate level, but in law school students from underrepresented racial/ethnic groups may have expectations that are more comparable to those of their White classmates, since they have already completed a bachelor's degree and been admitted to law school. Given earlier academic success these students may be more likely to envision a future that involves a well-paying job and the ability to pay back student loans. If true, this would explain the lack of significant differences in borrowing according to race. The fact that this finding related to a law student population contradicts earlier findings with regard to undergraduate populations may only serve to reinforce the notion that a useful model of student borrowing decisions must account for the contexts in which those decisions are made.

Second, Baum and Steele (2010) used descriptive statistics to determine characteristics of bachelor's degree recipients who borrowed at the highest levels. They

did not measure the effect of race on amount borrowed or even seek to determine the relation between race and amount borrowed. By including race as an independent variable in a regression model, this study was able to determine the effect of race on amount borrowed while controlling for other important variables, such as income and non-loan aid. While Baum and Steele (2010) suggest that there is a relationship between race and amount borrowed, this study found that for this particular population it is other variables like initial loan amount offered, non-loan aid, and cost of attendance that are significant, suggesting that race may be a confounding variable.

Finally, other studies that found significant differences according to race, including Price (2004) and Chambers (1992), looked at debt burden, which takes into consideration income and monthly loan payment amount, not amount borrowed in a given year. As discussed earlier, the greater likelihood of high debt burden found in certain racial/ethnic groups was found to be related to lower incomes, not necessarily higher levels of indebtedness.

Gender.

This study found that gender was not a significant predictor of the amount of student loans borrowed. Earlier research (Thomas, 2000) found that among bachelor's degree recipients men had significantly lower debt burdens than their female counterparts, but the difference in debt burden was a result of wage disparities, not necessarily disparities in amount borrowed. The findings of this study with regard to the effect of gender on amount borrowed are therefore not unexpected.

Age.

This study found that age was a significant predictor of the amount of student loans borrowed. The relationship between age and amount borrowed was positive, meaning that as age increased the amount borrowed increased. This positive relationship may be explained when one considers that older students may be more likely to have greater financial obligations, such as mortgage payments, that would influence them to borrow more. Older students who didn't attend law school immediately following their undergraduate education were most likely in the workforce before returning to higher education. Higher borrowing among this group may be due to these students attempting to replace their pre-law school income with student loans in order to meet their financial obligations. Another possible explanation is that older borrowers may have more experience with borrowing, like the example of an older student with a mortgage payment. A hypothetical older student who has a $300,000 mortgage may be more comfortable borrowing $100,000 to attend law school than a 22-year-old who just graduated from college having never borrowed a substantial amount before. As intuitive as these explanations may seem, it is also important to note that the effect size of the relationship between age and amount borrowed was very small, so the relationship was quite weak.

Marital status.

This study found that being married was a significant predictor of the amount of student loans borrowed. The relationship between being married and amount borrowed was negative, meaning married students tended to borrow less. One might assume that married students, like older students, have greater financial obligations, and therefore might tend to borrow more. However, those financial obligations are shared with their

partner, who may be working while the borrower is in law school. Income, both that of the student and the spouse, is factored into Expected Family Contribution, which was another independent variable in this model. So, the negative effect of being married on amount borrowed appears to exist even when income is controlled for, making this finding all the more curious. However, it is again important to note that the effect size of the relationship between being married and amount borrowed was very small, so the relationship was quite weak.

Expected family contribution.

This study found that Expected Family Contribution (EFC) was a significant predictor of the amount of student loans borrowed. The relationship between EFC and amount borrowed was negative, meaning that as EFC increased the amount borrowed decreased. This finding was not unexpected, given that EFC is the federal government's method for determining an individual's ability to pay for higher education. It is assumed that individuals with higher EFCs have less need for outside resources such as student loans. What is unexpected about this finding is the small effect that EFC had on amount borrowed, meaning there is a weak relationship. EFC only explained 0.3 percent of the variance in loan amount borrowed given that all other variables were in the model. One would expect EFC to be a much stronger predictor of borrowing.

The unexpectedly weak relationship found may be explained by some of the limitations in the way EFC is calculated, particularly for graduate student populations. First, for graduate students the only income used to calculate EFC is that of the student and his spouse if he is married. Parental income is not taken into consideration. Since parents sometimes do provide financial support to students even as they pursue graduate

education, this represents a shortcoming in the way EFC is calculated, as least when it comes to determining the true financial resources available to students when paying for their legal education. Second, income data that is used to calculate EFC is reported for the prior tax year, which is another reason that EFC doesn't necessarily represent a true picture of financial resources available during law school. Someone who quit a lucrative full-time career to start attending law school in the fall of 2010, for example, would've had to report her income from 2009 when completing the FAFSA, which would have dramatically overstated her expected income during law school (keeping in mind that full-time law students are not expected to work, particularly in their first year). These are just two limitations in the way the EFC is calculated, which help to demonstrate that EFC is not a precise method for determining the financial resources available to finance an individual's legal education, perhaps explaining the weak relationship between EFC and amount borrowed.

Cost of attendance.

This study found that cost of attendance (COA) was a significant predictor of the amount of student loans borrowed. The relationship between COA and amount borrowed was positive, meaning that as COA increased amount borrowed increased. This effect was expected, since it is intuitive that as costs increase one will likely need to borrow more. The degree of correlation between COA and amount borrowed was medium, as measured against benchmarks set by Cohen (1988). Among the independent variables found to be statistically significant predictors of amount borrowed, COA was one of the strongest predictors, second only to non-loan aid.

Class level.

This study found that class level was a significant predictor of loan amount borrowed in a given year. The relationship between class level and amount borrowed was positive, meaning that as class level increased amount borrowed increased. The effect of class level on amount borrowed was weak.

There are a couple of reasons why one might assume that borrowing would decrease as class level increases, making this finding somewhat surprising. First, full-time law students in their second and third years of law school are allowed to work part-time during the academic year and full-time during the summer. This potential for income that doesn't exist during the first year of law school might suggest that the need to borrow would be reduced. It also seems reasonable to assume that students in their second, third or fourth years of law school have more information about their expected expenses during the academic year, since they have the experience of prior years to rely on. This suggests they should be able to make better informed decisions about the amount to borrow, though that doesn't necessarily suggest they will borrow less. This latter issue is what this study attempted to address with research question 1f, "What percent of variance in loan amount borrowed is explained by initial loan amount offered, class level, and the interaction between initial loan amount offered and class level?" The results related to that research question will be discussed later in this chapter.

Student status.

This study found that student status was a significant predictor of loan amount borrowed. The relationship between part-time status and amount borrowed was negative, meaning part-time students tended to borrow less. This finding was expected. Part-time students are able to work throughout law school and many work full-time, so they are

assumed to have more financial resources available to pay for tuition and other expenses. Nevertheless, the effect of part-time status on amount borrowed was weak.

Cumulative grade point average.

This study found that cumulative grade point average (GPA) was not a significant predictor of the amount of student loans borrowed. One might assume that students who perform better borrow less, but this study found that academic performance has no effect on amount borrowed.

Total non-loan aid.

This study found that total non-loan aid was a significant predictor of the amount of student loans borrowed. The relationship between total non-loan aid and amount borrowed was negative, meaning that as total non-loan aid increased amount borrowed decreased. This finding was expected, given that every dollar of non-loan aid received proportionally reduces the amount a student is eligible to borrow. Total non-loan aid was the strongest predictor of amount borrowed of all variables in the model that were found to be statistically significant predictors.

Total credits.

This study found that total credits was a significant predictor of loan amount borrowed. The relationship between total credits and amount borrowed was positive, meaning that as total credits increased amount borrowed increased. However, the effect of total credits on amount borrowed was weak. Though students are charged more tuition the more credits they take, so one might assume borrowing would also increase, tuition is included in cost of attendance. Since cost of attendance was another independent variable in the overall model it is not surprising that total credits only explained 0.1

percent of the variance in loan amount borrowed given that all the other variables were in the model.

Initial loan amount offered.

Based on the theoretical and conceptual framework for this study, it was suggested that initial loan amount offered is a significant predictor of loan amount borrowed. As expected, this study found that initial loan amount offered would be found to be a significant predictor of loan amount borrowed. The relationship between initial loan amount offered and amount borrowed was positive, meaning that as initial loan amount offered increased amount borrowed also increased. The degree of correlation between initial loan amount offered and amount borrowed was weak to medium, as measured against benchmarks set by Cohen (1988). Among the independent variables found to be statistically significant predictors of amount borrowed, initial loan amount offered was one of the strongest predictors. The only stronger predictors were total non-loan aid and cost of attendance.

This finding confirms that the way financial aid administrators "frame" students' borrowing decisions through the financial aid offer letter and specific amount offered can and does have an impact on the amount students choose to borrow. The implications that this finding has for practice will be discussed later in this chapter.

Given the change in awarding methods between 2009-2010 and 2010-2011, it was important to study the relationship between initial loan amount offered and loan amount borrowed under both methods. It was hypothesized that not only would there be a significant relationship between initial loan amount offered and loan amount borrowed under both methods, but also that there would be no significant difference between the

relationships during both periods. This was based on the conceptual framework, since it was assumed that if behavioral economic concepts like bounded rationality, framing and status quo bias were evident in student decision-making through the relationship between initial loan amount offered and loan amount borrowed, then they should be evident in the relationship during both periods.

The findings of the study were consistent with this hypothesis. Loan amount borrowed was correlated with initial loan amount offered under the old awarding method (academic years 2008-2009 and 2009-2010) and under the new awarding method (academic year 2010-2011) and there was no significant difference in the relationship under the old awarding method as compared to the relationship under the new awarding method.

The interaction between initial loan amount offered and student status was examined to determine whether the effect of initial loan amount offered on loan amount borrowed was different for full-time students versus part-time students. The model with two independent variables, initial loan amount offered and student status, did explain significantly more variance in loan amount borrowed than the model with initial loan amount offered as the lone independent variable. However, the model with three independent variables, initial loan amount offered, student status, and the interaction between initial loan amount offered and student status, did not explain significantly more variance in loan amount borrowed, suggesting that the effect of initial loan amount offered on loan amount borrowed was not significantly different for full-time versus part-time students.

The interaction between initial loan amount offered and class level was examined to determine whether the effect of initial loan amount offered on loan amount borrowed was different for students depending on their year in law school (first, second, third or fourth). The model with two independent variables, initial loan amount offered and class level, did not explain significantly more variance in loan amount borrowed than the model with initial loan amount offered as the lone independent variable. Nor did the model with three independent variables, initial loan amount offered, class level, and the interaction between initial loan amount offered and class level, explain significantly more variance in loan amount borrowed, suggesting that the effect of initial loan amount offered on loan amount borrowed does not differ significantly by class level.

This finding contradicts the assumption stated earlier in this chapter, that students in their second, third or fourth years of law school have more information about their expected expenses during the academic year, since they have the experience of prior years to rely on, and therefore should be able to make better informed decisions about the amount to borrow. In other words, they should be less susceptible to framing and status quo bias, and should be more likely to make rational borrowing decisions. However, this finding suggests that is not the case.

Limitations

As with any study, there are limitations to the present study that are important to note. First and foremost, the fact that the assumption of homoscedasticity was not met limits the reliability of the results. Greater variance in residuals was observed at higher values of X, meaning that the amount of error is larger at higher values of X and therefore, a single regression equation is not sufficient for all values of X. As previously

indicated in chapter 3, the data was not transformed to correct this issue of heteroscedasticity. Transforming the data, by its very nature, would have changed the values of X and resulted in different b values, which would have had an impact on the interpretation of the b values. Though the data in this study was not transformed, a future study using similar data may choose to transform to ensure that all assumptions of multiple regression are met. The fact that this particular assumption has not been met in this sample means that one should be cautious in interpreting the findings of this study, particularly where the effect sizes are small, as in the case of many of the demographic independent variables in this study that were found to be significant.

Second, as described in chapter 3 there is some question as to whether the independence of observations assumption has been met. The fact that a single student may be included in the sample more than once, since she may have enrolled during and borrowed loans in more than one academic year represented in the sample, is problematic. Though the amount a student was awarded or borrowed wasn't dependent on the amount awarded or borrowed in the prior year, and many of the values for the independent and dependent variables vary from year to year even for the same student, those values are still more likely to be correlated for the same student from year to year than they are for different students. Though it's worth recalling that the Durbin-Watson statistic for the sample seemed to indicate independence of observations, there is still cause for caution. A future study should investigate similar research questions with a population where students are not represented multiple times in the sample.

Third, there were limitations in the data elements that were available for this sample. For example, having undergraduate GPA and LSAT scores as independent

variables may have shed light on how prior academic performance impacts borrowing. One might hypothesize that those students who have reason to be optimistic about their law school performance and future job prospects, as indicated through high undergraduate GPAs and LSAT scores, may be more willing to borrow high amounts, since it may be seen as less risky to do so. Another important data element that ideally would have been taken into account in the dependent variable, were it available, is credit card debt and other personal debt incurred while in law school. It is possible that students who borrowed less because they were awarded less simply incurred larger amounts of other types of debt as a result. If the desired effect of purposefully designing student loan packages to encourage lower levels of student loan borrowing is to reduce total debt burden, that is not being achieved if one type of debt is simply replaced for another, likely more costly one.

Another omitted variable that is difficult to determine for graduate students, but would have been valuable as an independent variable in this study, is socioeconomic status. As cautioned in chapter 3, income, as reported on the FAFSA, cannot be used as proxy for socioeconomic status in this study, because of the way that income is calculated for graduate students. For purposes of the FAFSA, income only includes income earned by the student and his spouse, and does not include parental income. Since the literature on student loan borrowing and socioeconomic status is mostly concerned with borrowing at the undergraduate level, socioeconomic status in these studies refers to the status of the student's family, meaning his parents and brothers and sisters. At the graduate level, for FAFSA purposes, the student's family refers to his spouse and children, if any. So, even if income were taken as a proxy for socioeconomic status at the graduate level, it would

be like comparing apples to oranges when considered in context of the literature on this topic at the undergraduate level. Ideally, a future study could obtain additional data to determine socioeconomic background, meaning the socioeconomic status in which the student was raised.

Implications for Theory

The findings of this study imply that human capital theory alone is not a sufficient theoretical basis for understanding decisions about student loan borrowing, particularly decisions about the amount to borrow. The fact that loan amount offered explained a statistically significant proportion of variance in loan amount borrowed suggests that the decisions that administrators make in determining the initial loan amount to offer students can have an impact in determining the amount students will ultimately borrow. This reinforces the notion of administrators as "choice architects" and suggests that behavioral economic concepts like framing and status quo bias may be important in understanding student loan borrowing decisions.

However, it is also clear from the findings that human capital theory and behavioral economic concepts are not the only lenses through which student loan borrowing decisions should be examined. The findings also suggest that additional aspects of the context in which students make loan borrowing decisions are important. The relationship between initial loan amount offered and loan amount borrowed suggests that the higher education context, which Perna (2006) described as "the role that higher education institutions play in shaping student college choice" also shapes student decisions about borrowing. Additionally, the finding that being married has a negative effect on loan amount borrowed cannot easily be explained by human capital theory or

behavioral economics. Instead, there may be sociological reasons why a married law student is likely to borrow less than his unmarried counterpart. Similarly, something about the sociological context in which older students make borrowing decisions may help to explain the positive relationship between age and loan amount borrowed.
In another example, the fact that EFC did not explain a larger percent of variance in loan amount borrowed may be reflective of the policy context in which students make borrowing decisions. EFC is calculated using a complex formula specified in the Higher Education Act as amended and is supposed to be a reflection of the amount that a student and her family can reasonably be expected to pay for her education. The finding that there is only a weak relationship between EFC and loan amount borrowed suggests that, particularly at the graduate level, EFC is not a useful tool for determining actual need and has relatively little influence on amount borrowed.

Finally, the finding that the overall model explained 46.7 percent of variance in loan amount borrowed provides support for a conceptual model of student loan borrowing that considers multiple contextual layers, similar to Perna's (2006) model of student college choice. The fact that less than half of the variance in loan amount borrowed can be explained by the loan awarding variables and demographic variables included in this model is additional evidence that there are many more variables that have an effect on student loan borrowing decisions.

Recommendations for Practice

Though rooted in theory and a conceptual framework based in behavioral economics, the ultimate goal of this study was to contribute to practice by helping financial aid administrators and policymakers to understand how institutional awarding

practices and student demographic variables predict the amount that law students borrow. With that goal in mind, several recommendations for practice are supported by the findings of this study.

First and foremost, the findings of this study provide support for the notion that the amount of student loans initially offered in students' financial aid award packages has an effect on the total amount students borrow, at least in law student populations with similar characteristics to the population studied. If administrators are concerned with the large amount of loans being borrowed, they should no longer rely on the assumption that students will make entirely rational borrowing decisions. It seems clear from the conceptual framework and the results of this study that students do not necessarily make rational decisions, carefully weighing all of the information available to them and considering both their short and long term interests. Instead, they may be subject to bounded rationality in this arena, and may defer to the status quo when deciding how much to borrow—that is, simply borrowing the amount offered as a default. Therefore, institutions should experiment with under-packaging as a way of reducing student borrowing levels—that is, initially offering less than the maximum a student is eligible to borrow and requiring them to request a higher amount if the offered amount is insufficient.

In addition, institutions seeking to reduce student loan borrowing should carefully consider other strong predictors of loan amount borrowed, specifically cost of attendance and total non-loan aid. Total non-loan aid was determined to be the strongest predictor of loan amount borrowed in this study. Of course, every institution would like to be able to award more grants, scholarships, and work-study. Unfortunately, at many institutions

those resources are limited. However, institutions do have somewhat more influence in determining total cost of attendance. Tuition is usually the largest component of cost of attendance, and reducing tuition is easier said than done. But institutions should also look for other ways to reduce the cost of attendance and should develop the full cost of attendance in such a way that it is a conservative estimate of students' expected expenses without being too restrictive.

Recommendations for Future Study

While this study has contributed to our understanding of the effect of institutional awarding practices and other variables on the amount that law students borrow, it also suggests opportunities for further research.

One potential area for further research is to explore this same issue and similar research questions in different populations, such as undergraduate borrowers or graduate borrowers in other professions or disciplines. Though borrowing is particularly high in law school populations, there is also cause for concern about the high amounts being borrowed among undergraduates and graduate students in other programs. The quasi-experimental research design in this study was possible because of Midsize Law School's change in awarding practice from an under-packaging method to a full-packaging method. If other institutions heed the recommendations for practice made earlier in this chapter and switch to under-packaging methods they would provide additional opportunities for research with different populations.

Next, the effect of other awarding practices designed to reduce student borrowing should be studied. There are institutions, many of them community colleges, who have experimented with ways of reducing borrowing and the effects of these methods on loan

amount borrowed should be determined. Community colleges are most likely to actively try to minimize the amounts students borrow or discourage borrowing altogether because they are typically low-cost institutions and it is assumed that borrowing should not be necessary. For example, some institutions require students who wish to borrow student loans to undergo a loan application and entrance counseling process that goes beyond the minimal requirements set by the federal government. They may require the student to attend presentations on relevant topics, such as maintaining good credit, budgeting, and other financial planning topics. They may require students to submit a budget that shows how loan proceeds will be spent. Institutions that require students to jump through these additional hurdles to borrow are essentially encouraging students to make well-informed, rational borrowing decisions. These programs place a greater burden on students and have a substantial cost to the institution in terms of human resources, so from an institutional perspective it is important that they understand the effect these practices have on borrowing, to ensure that they are meeting their goal of reducing borrowing. Research into the effects of these practices could also demonstrate their value and provide additional recommendations for practice for other institutions that are concerned with reducing student loan borrowing.

However, when studying awarding practices designed to reduce student borrowing researchers should design their research projects, whenever possible, to identify unintended consequences of such practices. For example, as mentioned earlier, this study did not measure other types of debt incurred by law students, such as credit card debt. It is possible that students who borrowed less because they were awarded lower student loan amounts may not have reduced their spending accordingly, but rather

maintained the same level of spending and incurred higher overall borrowing costs by paying for some education-related expenses with credit cards. A future study could address this limitation by using overall debt, not just student loan debt, as its dependent variable.

Similarly, though the more burdensome awarding practices used by some community colleges may be designed to encourage students to make better borrowing decisions, they may deter students from borrowing student loans at all, which could have detrimental effects. For one, students may use credit cards to pay for their expenses, which typically have higher interest rates than student loans. Another potential consequence to arduous loan awarding processes that result in students forgoing loans altogether is that some students may choose to work full-time and enroll on a part-time basis, which studies have shown to lower a student's chances of completing her degree. Future, rigorous studies in this area should be designed to identify these and other possible unintended consequences.

Third, some of the unexpected findings related to certain demographic variables should be investigated further. For example, the positive relationship between age and loan amount borrowed and the negative relationship between marriage and loan amount borrowed may be worthy of additional examination. Graduate programs like law schools often have substantial populations of non-traditional age students, so having a better understanding of the borrowing behavior of older and married students could have important implications for awarding and counseling these students.

Finally, further studies should seek to more fully examine the effect of EFC on loan amount borrowed. The finding of this study that EFC has only a weak negative

effect on loan amount borrowed was surprising and suggests that EFC is not as good a determinant of total financial resources available to a student to finance her education as policymakers and administrators may believe. It's reasonable to assume that if EFC was accurate in estimating a students' ability to pay for higher education than the negative effect of EFC total amount borrowed would have been stronger. This is especially important to study at the graduate level, due to the shortcomings of the formula used to calculate EFC for graduate students.

Conclusion

This study examined the effect of institutional loan awarding practices and other variables on loan amount borrowed. Literature in behavioral economics suggested that institutions may have an effect on student loan borrowing through the decisions they make in designing the loan packages that are presented to law students. The literature suggested that in making decisions about how much to borrow, students are subject to bounded rationality, and may make irrational decisions based on framing and status quo bias. This study found that initial loan amount offered is a significant predictor of loan amount borrowed, and that the relationship between initial loan amount offered and loan amount borrowed was not significantly different when data under old and new awarding methods were compared, thereby confirming the hypotheses grounded in the conceptual framework. Based on these findings, several recommendations for practice and further research were provided.

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