2007 AIR RESEARCH GRANT PROPOSAL

**The Effect of Loans on Time to Doctorate Degree:
Differences by Race, Field of Study and Institutional Characteristics**

Grant Amount Requested: $30,000

Principle Investigator:

Dongbin Kim, Assistant Professor
Educational Leadership and Policy Studies
School of Education at University of Kansas
Lawrence, KS 66045
Phone: 785) 864-9845, E-mail: dbkim@ku.edu

**Databases of Interest: Survey of Earned Doctorate (SED) from NSF and Integrated
Postsecondary Education Data System (IPEDS) from NCES**

Authorized Institutional Representative:
Barbara Armbrister, Director
Administration and Finance Services
University of Kansas Center for Research
Lawrence, KS 66045
Phone: 785) 864-3444 Fax: 785) 864-5025
E-mail: barmbrister@ku.edu

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Principle Investigator   **Authorized Institutional Representative**

Project Summary

The median amount of federal student loans that doctoral students borrowed at their graduation in 2003/04 was $44,743, nearly four times of the amount of $11,500 in 1992/93. This dramatic increase was faster than any other groups with Associate, Bachelor's, Master's, or professional degree (American Council on Education, 2005). Although the federal student loan program is considered one of the government's most successful policy initiatives to provide equal educational opportunity (Kim, in press), it has been the "focus of intense political struggles since the 1960s and continues to be a source of conflict" (Griswold, 1999, p.143). Moreover, research efforts on borrowing patterns have mainly focused on undergraduate students. Therefore, this study focuses on the distinct effects of undergraduate and graduate loan aouts on time to doctoral degree and the ways in which the impact of loan varies by student race/ethnicity, field of study, and institutions. A Hierarchical Linear Model (HGLM) will be used to clarify the effects of individual and institutional level variables, as well as cross-level interaction effects on time to doctoral degree. Two national data sets will be incorporated to build comprehensive statistical models. Student level data will be derived from the Survey of Earned Doctorate (SED:2005) and institutional level data will be derived from the Integrated Postsecondary Education Data System (IPEDS). Both of the data sets contain the IPEDS identification variable, thus making it possible to incorporate the four databases.

The proposed study will have significant implications for policy makers (governmental as well as institutional policy makers), who need to be aware of the impact of increasing reliance on loans, particularly among doctoral students. With more information, policy makers will have an opportunity to devise financial aid programs that target those groups that are being most influenced (Heller, 1999) and thus level the playing field, especially for minority students.

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Statement of Purpose

Graduate schools prepare students not only for future careers in academia, but also for leadership positions in government, healthcare, non-profits organizations, and other industries. Given the likelihood of doctoral degree recipients being active in research or leadership positions, they may have considerable opportunity to influence public policy. In a global, knowledge-driven economy, the need for a highly educated workforce is vital to maintaining the nation's status and economy. Doctoral granting institutions, therefore, play an important role in educating academicians and professionals alike who can take the lead in this highly interdependent world. Unfortunately, the nation's graduate schools fail to fully educate many students who enter doctoral programs. Doctoral programs are plagued by high attrition rates. According to the Council of Graduate Schools (2005), fewer than half of all students pursuing a doctorate actually complete it. Bowen & Rudenstine (1992) cite time to degree as an important component of doctoral degree completion. Although relatively few studies have examined time to degree, it has been found to negatively affect degree completion (Bair and Haworth, 1999; De Valero, 2001). The longer it takes, the more prone students are to attrition (Bair and Haworth, 1999). In 2004, over 400 U. S. colleges and universities awarded doctorates in 2004 to over 42,000 students (Hoffer, Welch, Williams, Hess, Webber, Lisek, Loew, Guzman-Barron, 2005). Of the United States citizens, just over half of those recipients were female. Underrepresented minority students accounted for 20 percent, the largest percentage to date (Hoffer et al., 2005). The number of degrees conferred in 2004 represents a 3.4 percent increase over the previous year (Hoffer et al., 2005). This represents a significant interest in offering and pursuing terminal degrees and demonstrates the need for heightened awareness of the time it takes students to earn doctoral degrees (Hoffer et al., 2005).

From the student perspective, the decision to pursue a doctoral degree cannot be taken lightly. In addition to the academic responsibilities, pursuing doctoral study often means a lengthy delay in entering, or a temporary stop out from, the workforce. Moreover, doctoral study can be stressful and may lead to role conflicts with other obligations, such as family and job responsibilities. Although it is true that people with doctorate degrees are more likely to have higher earnings and lower unemployment rates than others with bachelor's or a master's degrees (Bureau of Labor Statistics, 2003), financing graduate studies is also not an easy task for many, if not for all. A recent report from the Council of Graduate Schools (2006) indicates that the average price of education at the doctoral programs increased more than 50 percent from 1995 to 2003, regardless of institutional control. For instance, the average price of attending private institutions at doctoral level in 2003 was $29,703, a 79 percent increase from $16,631 in 1995. Further, the amount of financial assistance provided through grants or assistantships has not kept pace with the increased educational expenses, and these situations have forced increasing numbers of graduate students to take out loans during the same time period. Among White doctoral students, the percentage of borrowers increased from 21 percent in 1995 to 34 percent in 2003. The percentage of borrowers increased more significantly among underrepresented minority students, jumping nearly 20 percent, from 25 to 43 percent (CGS, 2006). The median accumulative federal loans for doctorate recipients was $44,743 in 2003/04, more than triple the amount of $ 14,927 in 1995/96. This increase was faster than other groups who completed Associate, Bachelor's, Master's, or professional degree (American Council on Education, 2005).

It is noteworthy that the percentages of borrowers and the average loan amount are substantially different by the field of study and race/ethnicity (Hoffer et al., 2005). Among the doctorate recipients in 2004, graduates in engineering and physical sciences were the least likely

to borrow and graduates in social sciences and humanities were the most likely to have loans. Black, Hispanic, and American Indian doctorate recipients had substantially higher education-related debts than White or Asians. In 2004, Asian doctorate recipients outnumbered Blacks in physical sciences (241 to 84) and engineering (242 to 85) and Black doctorate graduates outnumbered Asians in social sciences and humanities (296 to 198 and 172 to 140, respectively) (Hoffer et al., 2005). Given that many federal research grants and other funding opportunities have been targeted on science and engineering, it is clear that the differences in loan amounts by race/ethnicity are partly due to the disparities in the distribution of different racial/ethnic groups across the field of study. However, even among those in the same field, Black or Hispanic doctorate recipients were still more likely to have higher levels of debt than their counterpart Asians or Whites, and this pattern is consistent across all broad fields of study (Hoffer et al., 2005).

Similarly disturbing racial/ethnic group differences in the same field exist in differing time to doctorate degree (Hoffer et al., 2005). Among the doctorate recipients in physical science, for instance, the median time to degree for Asians and Whites was seven years, compared to 7.7 years for Black and 7.5 years for Hispanic doctorates. Despite the significant disparities in the levels of debt and time to degree by race/ethnicity, even among those in the same field, little is known about the specific factors that affect time to doctorate degrees and why and how there are significant differences by race. Much of the focus of research on the impact of financial aid (debt in particular) has focused on undergraduate students. It is equally important to understand the relationship of debt on graduate students, particularly since graduate students incur much higher levels of debt due to their prolonged time in higher education, and because the rate of increase in debt level is significantly higher than any other degree recipient groups.

Research Questions

This study seeks to examine factors that affect time to doctorate degree and if there are any significant differences by racial/ethnic groups, with a particular emphasis on the effect of debt burden. The research questions in the study are as follows:

(1) What are the factors that affect time to doctoral degree? Are there significant disparities by race/ethnicity, field of study, and institution?

(2) What are the impacts of undergraduate and graduate debt levels on time to doctorate degree? Are there significant disparities by race/ethnicity, field of study, and institution?

Measures of Time to Degree

In this study, time to degree is measured in two different ways. Total time to degree (TTD) measures elapsed time from completion of the baccalaureate degree through completion of the doctorate, including time periods during which the student may not be enrolled (Hoffer et al., 2005). Previous studies have argued regarding whether large amounts of undergraduate loan may (or may not) act as a deterrent to the acquisition of additional education, and more research needed on this relationship (Heller, 2001; Kim & Eyermann, 2006). By examining the relationship between this measure of time to degree and the amount of loans (from undergraduate and graduate programs separately), this study will expand our current understanding about how "undergraduate debt level" is related to elapsed time from completion of the baccalaureate degree to entrance into graduate school as well as how the "combined debt from both undergraduate and doctoral education" is related to time to doctorate degree. Another measure is referred to as graduate time to degree (GTD) and includes the amount of time spent in graduate school until completion of the doctorate (Hoffer et al., 2005).

Literature Review

Previous research on graduate students and time to degree completion focuses largely on student characteristics and institutional/departmental factors that facilitate or hinder time to doctorate degrees. Demographic variables such as gender, race, and family obligation influence time to degree. Males typically finished in less time than females when measured either by total time or since entry into graduate school (Abedi and Benkin, 1987; Hoffer et al., 2005). The median total time to degree for males was 9.5 years, compared to 10.7 for females (Hoffer et al., 2005). Differences also exist in time to degree by race/ethnicity (Hoffer et al., 2005). Asian students had the shortest total time to degree (8.7 years), followed by Hispanic (10.2), white (10.5), black (12.3), and American Indian (13.4) (Hoffer et al., 2005). Marked variance in time to degree exists when considering field and ethnicity simultaneously. For example, the median graduate time to degree for Asian students in professional/other doctorate programs is 8.9 years, but the median time to degree of 12.3 for Hispanic students is considerably longer, a difference of 3.4 years (Hoffer et al., 2005). For education doctorates, the median graduate time to degree is 10.7 years for Asian students, but at 13.8 years, is 3.1 years longer for American Indian students (Hoffer et al., 2005). Ranges for the other fields are less drastic (closer to 1 year) (Hoffer et al., 2005).

Students who take less time to complete doctoral degrees tended to have fewer dependents (Wilson, 1965; Abedi and Benkin, 1987). Family responsibilities were identified as increasing the amount of time it took to earn a degree (Wilson, 1965). This result was confirmed by Siegfried & Stock (2000) who found no significant differences in age, marital status, or race but did find that parenthood delays progress considerably for women.

Academic ability and employment outlook are also related to timeliness of degree completion. Tuckman et al. (1990) found that students who earned baccalaureate degrees at first-tier doctoral-granting institutions finished their doctorate degrees more rapidly than students who earned undergraduate degrees at other types of institutions. On the other hand, inadequate skills or preparation also serve as deterrents to completing the doctorate in a timely fashion (Wilson, 1965; McFarland & Coplow, 1995). Because criteria for positions in the professoriate have increased, competition and demand for jobs have also increased creating anxiety among doctoral students (McFarland & Coplow, 1995). Therefore, even talented students may remain in their programs longer in an effort to hone their research and teaching skills to increase their marketability for future careers in academia (McFarland & Caplow, 1995). Tuckman et al. (1990) offers the explanation that the body of knowledge needed to complete doctoral degrees has expanded, thereby taking students additional time to learn and to produce quality work. In a study of PhD's in Economics, Siegfried & Stock (2000) found that, when starting salaries were rising faster, students in doctoral programs in economics completed degrees in less time.

It important to understand the implications of finances on time to degree. Full-time employment and financial pressures have been identified as barriers to completion (Bain and Haworth, 1999). Students with longer periods of full-time, pre-doctoral employment took longer to complete doctoral programs (Wilson, 1965). Abedi and Benkin (1987) found that the source of financial support was the strongest predictor of time to degree. Students who depend on their own financial sources tend to take longer and are less likely to complete a degree (1999). Moreover, students who intended to pursue post-doctoral study were likely to complete in a more timely fashion than students who intended to pursue outside employment. The researchers suggest that those who intended to pursue outside employment were likely to have supplemented

their income with outside employment while working on their degree, thereby potentially lengthening the time to degree (Abedi and Benkin, 1987). Siegfried & Stock (2000) suggest that married students may finish their degrees faster due, in part, to the financial support generated by the spouse. Wilson (1965) concluded that students who had shorter times to degree completion had a broader base of financial support.

In 2004, 69% of doctorate recipients received financial support from departmental or institutional sources, including teaching and research assistantships as well as fellowships (Hoffer et al., 2005). The type of financial support appears to relate to degree completion. Working as a teaching assistant ranked 2nd among variables identified by students as lengthening their time to degree, yet it was identified as being the most important source of income for doctoral students (Wilson, 1965). Research assistantships were the most important source for students in science fields (Wilson, 1965). Siegfried & Stock (2000) found that doctoral students in economics who had a combination of fellowships and assistantships completed their programs faster than students who relied on fellowship support alone. Likewise, Ehrenberg and Mavros (1995) found that students with fellowships had higher degree completion rates and shorter time to degree than students who received teaching assistantships. Wilson (1965) found that students serving as teaching assistants who did not have a graduate appointment were likely to take more time to complete their degrees than students with research assistantships. He postulates that students need to hone their skills in preparation for future teaching careers which could result in slowing their degree progress (Wilson, 1965).

There is some differentiation among fields of study and patterns of student loan debt. S&E doctoral degree recipients incur more debt than students in other fields (Rapoport, 1998). Upon graduation, 39% of S&E doctoral recipients reported having no debt, compared to 48% of

doctorate recipients in other fields. Eight percent of doctoral recipients in S&E had debt levels

over $30,000, compared to six percent for non S&E fields. Among S&E fields, doctoral

recipients in computer science, engineering, and math are the least burdened by debt. About ½

have no debt, and fewer than 5% owe more than $30,000. For non-S&E fields, doctoral

recipients in education fare the best. 55% of students who earned doctorates in education

reported not having any debt upon graduation, and only five percent had debt greater than

$30,000. About 10% of doctoral recipients in law, business, and architecture had debt exceeding

$30,000 (Rapoport, 1998).

Underrepresented minority students were affected more than white or Asian students as

larger numbers of underrepresented students not only have debt but have greater levels of debt.

From 1993-1996, only 27 percent of underrepresented minority students had no debt compared

to 40% of whites and 45% of Asians who reported no debt upon completion of a doctorate in

S&E. Ten percent of underrepresented students reported debt levels of $20,000-$30,000,

compared to 8 percent of whites and six percent of Asians. Meanwhile, debt levels of over

$30,000 were more likely to affect underrepresented minorities (12% compared to 7% for Asians

and whites). Although indebtedness varies across field, these patterns were consistent across all

S&E fields (Rapoport, 1999).

Research Methods

Data Source

The purpose of this study is to clarify if loan amount influences time to doctorate degree

and if there are significant differences in the relationship by race/ethnicity, field of study, and

institution. A recent report from NSF (2006) indicates that top 10 percent of the doctoral

institutions granted 46 percent of all doctorates in 2005 and most of these institutions were large, research intensive public or private institutions. In contrast to the scarcity of research on doctoral students, extensive studies have found that institutional characteristics have an independent effect on various measures of undergraduate student success even after controlling for students' own individual characteristics (Astin, 1993; Hu, & Kuh, 2003; Kuh & Vesper, 1997; Pascarella & Terenzini, 1991). Therefore, time to doctorate degree should also be understood in the context of a multi-level phenomenon because it is the result of doctorate recipients' individual characteristics and of the interaction between doctorate recipients and the characteristics of the institutions that they attended. Two national data sets (Survey of Earned Doctorate from NSF and IPEDS from NCES) will be incorporated to build comprehensive statistical models to clarify the relationship between loan amount and time to doctorate degree and how this relationship varies by institutional characteristics. Both data sets contain the IPEDS identification variable, thus making it possible to incorporate the two databases.

Student level variables will be derived from the Survey of Earned Doctorate (SED) in 2005 which was conducted by the National Science Foundation. The data from the 2005 SED consisted of all individuals receiving a first research doctorate (second doctorates are not included) from U.S. academic institutions in the 12-month period ending on June 30, 2005. The total respondents for the survey was 43, 354 persons from over 400 U. S. colleges and universities. It is not necessary to conduct any statistical techniques to adjust for sampling error or design effect given that the SED offers a census data. The pattern of financing graduate school is significantly different by the citizenship of doctorate recipients. Therefore, non-U.S. citizens with temporary visa (26 percent of the total respondents) will be excluded in the study, thus the resulting data are from 32,080 persons. *Institutional level variables* will be derived from

the Integrated Postsecondary Education Data System (IPEDS) database which offers institutional structural characteristics (e.g, institutional size) and student composition variables (e.g., the racial/ethnic distribution of the student body).

Variables.

The dependent variable, time to doctorate degree will be measured in two different ways: (1) Total time to degree (TTD) which measures elapsed time from completion of the baccalaureate degree through completion of the doctorate, including time periods during which the student may not be enrolled and (2) graduate time to degree (GTD) which includes the amount of time spent in graduate school until completion of the doctorate. *Student level variables* are grouped into three categories: (1) individual background variables; (2) education experience variables; and (3) finance variables. (1) Individual background variables include gender, race (Black, Hispanic, White, and Asian), age, martial status, number of dependents, and students' parental education. Selecting these individual background variables is based on the general significant findings in time to doctorate degree literature (Abedi and Benkin, 1987; Hoffer et al., 2005; Rapoport, 1998). (2) Education experience variables include the characteristics of the institutions where students completed their bachelor's degree (Carnegie classification, institutional type – whether it is HBCU, HSI, or women's college, institutional control, institutional size, and selectivity), [1] whether students changed their field of study from undergraduate to graduate school, and the number of fulltime years during doctoral program. Previous research on baccalaureate origins of doctorate recipients has indicated that some

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[1] Given that baccalaureate institutions of doctorate recipients do not directly affect their time to doctorate degree, the characteristics of baccalaureate institutions will be used as individual level variables compared to the characteristics of doctorate institutions, which directly affect time to doctorate, thus will be used as institutional variables.

institutional types (e.g., HBCUs or women's colleges) are more efficient in producing more graduates who subsequently earn doctoral degrees than other types of institutions (Solarzano, 1995; Wolf-Wendel, 1998; Wolf-Wendel, Baker, & Morphew, 2001). For instance, among the black doctoral recipients in 2004, 27 percent earned their bachelor's degrees from HBCUs (Hoffer et al., 2005). Whether students stayed in the same field is also an important predictor for time to doctorate degree given that the proportions of students changing field of study are significantly different by field, ranging from 30 percent in education to 59.5 percent in STEM field and 74.8 percent in Engineering (Hoffer et al., 2005). Institutional size refers to the total number of undergraduate students. Institutional selectivity indicates the average SAT verbal and math scores of entering college freshmen (3) Finance variables include undergraduate debt, graduate debt, and primary and secondary source of financial support (the types of primary and secondary sources are fellowship/scholarship, dissertation grant, teaching assistantship, research assistantship, traineeship, internship, personal savings during graduate school, Spouse's/significant other's earnings/savings, and employer reimbursement). Undergraduate and graduate debts include the amounts that are directly related to education from any source.

Institutional level variables which are associated with time to doctoral degree are categorized into structural characteristics and student composition (Astin et. al., 1996; Tinto, 1993; National Center for Education Statistics, 1996; Thomas, 2000). Structural characteristics of the doctorate institutions are Carnegie classification, institutional type (HBCU, HSI, or women's college), institutional control, institutional size, and selectivity. Student composition variables represent the peer group effect of the institution (Bryk and Thum, 1989; Rumberger, 1995). Student composition variables include racial/ethnic distribution of the graduate students in the same field, the average time to doctorate degree in the same field, and the percentage of part-time students

out of the total number of graduate students in the same field. As will be discussed in the

statistical analysis, all statistical models will be conducted separately by the field of study.

Therefore, other than structural characteristics of the institutions, all student composition

variables are operationalized by field of study

Statistical Analysis

As indicated in the previous section, time to degree and the levels of debt are

significantly different by race/ethnicity even among those in the same field of study (Hoffer et

al., 2005). Previous research indicates that whereas undergraduate education is largely viewed as

an institutional responsibility, graduate persistence is more often seen as a departmental

responsibility due to its decentralized nature (Bowen & Rudenstine, 1992). Therefore, to clarify

if the relationship between debt burden and time to degree differs by race/ethnicity within the

same field, a separate statistical analysis will be conducted by the broad field of study defined by

NSF: Education (N=4,609), Engineering (N=4,739), Humanities (N=3,958), Life Sciences

(N=6,886), Physical Sciences (N=4,957), Social Sciences (N=5,059), and Business,

Management, and other professional (N=1,872).

Given that students within colleges (or within same field of study) are more similar than

students in different colleges and given that students are influenced by the characteristics of the

college altogether, students can be grouped in colleges.[2] Researchers are aware of this nested (or

multilevel) structure of the data and seek to estimate the effects of multilevel variables in a single

level statistical model, either by aggregating values of student-level variables in a college-level

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[2] It should be noted that in this proposal, the terms level-1, student-level, individual level, and within-college level are used interchangeably. Similarly, the terms level-2, institutional level, college-level, and between-college level are used identically.

analysis or by disaggregating values of college-level variables in a student-level analysis or (Raudenbush & Bryk, 2002). Both approaches, however, can produce misleading results. For example, aggregating values of student variables in a college-level analysis can create an aggregation bias, which may lead to inappropriate inferences (Porter & Umbach, 2001; Raudenbush & Bryk, 2002). Disaggregating values of the college variables in a student-level model violates the assumption of independence of observations because students within a particular college have the same values for institutional characteristic variables. When the assumption of independence of observations is violated, the statistical model misestimates standard errors, which may increase the likelihood of Type I errors. Hierarchical linear models (HLM) have been developed to overcome these limitations by allowing researchers to assess more accurate estimates of the effects of institutional level variables on student level outcomes (Thomas, 2000). In other words, HLM analysis estimates the unique contributions of institutional characteristics on student-level outcome variables and on the relationship between student-level predictors and outcome variables.

Seven separate sets of hierarchical linear model (HLM) will be conducted for education, engineering, humanities, life Sciences, physical sciences, social sciences, and business and other professional. Given the significant disparities in loan amount by racial/ethnic groups within the same field of study, interaction terms between loan and students' race will be included in the statistical models to clarify the distinct effect of loan amount on time to doctoral degree of different racial/ethnic groups. In the HLM model, variables will be entered sequentially: Individual background variables will be included in Model 1, then education experience variables will be added to Model 1, and finance variables will be added to Model 2 and interaction terms will be added to Model 3. Four sequential models make it possible to examine

both the direct effects of the entered variables and the interaction effects of these variables with the successive variables (Hu and Hossler, 2000). Lastly, level 2 variables will be entered, which will clarify the net impacts of institutional level characteristics (or student composition in the same field) on time to doctorate degree, all student level characteristics within school being equal (Thomas, 1998).

Policy Relevance, Significance of Research, and Intended Audience

The median amount of federal student loans that doctoral students borrowed at their graduation in 2003/04 was $44,743, nearly four times of the amount of $11,500 in 1992/93. This dramatic increase was faster than any other groups with Associate, Bachelor's, Master's, or professional degree (American Council on Education, 2005). Although the federal student loan program is considered one of the government's most successful policy initiatives to provide equal educational opportunity (Kim, in press), it has been the "focus of intense political struggles since the 1960s and continues to be a source of conflict" (Griswold, 1999, p.143). Moreover, research efforts on borrowing patterns have mainly focused on undergraduate students. Therefore, the proposed study will have significant implications for policy makers (governmental as well as institutional policy makers), who need to be aware of the impact of increasing reliance on loans, particularly among doctoral students. With more information, policy makers will have an opportunity to devise financial aid programs that target those groups that are being most influenced (Heller, 1999) and thus level the playing field, especially for minority students.

Dissemination Plan

I plan to disseminate the findings of this study through national conference and publications. In order to obtain preliminary feedback and suggestions, proposals for presentations will be submitted to appropriate conferences such as the annual meeting of the American Educational Research Association (AERA), Association for Institutional Research (AIR) and the Association for study of Higher Education (ASHE). Additionally, I will seek to publish the findings of this dissertation in scholarly peer reviewed journals such as Research in Higher Education, the Review of Higher Education and the Journal of Student Financial Aid.

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Wolf-Wendel, L. E., Baker, B. D., & Morphew, C. C. (2000). Dollars and $ense: Institutional resources and the Baccalaureate origins of women doctorates. *Journal of Higher Education*, 71(2), 165-186.

Autobiographical Statement: Dongbin Kim

Dr. Dongbin Kim is an assistant professor in the Department of Educational Leadership and Policy Studies at the University of Kansas. Her research interests center around financial aid policy, equity, educational impact of racial/ethnic diversity, and comparative/international higher education policy. In her scholarly work, Dr. Kim has examined the impact of loans on students' degree attainment, the impact of financial aid on students' college departure pattern: drop out or transfer out, the effects of undergraduate loans on plans to attend graduate attendance: Prior to and after the Higher Education Amendment of 1992. In her scholarly work, Dr. Kim has been extensively utilizing large national data sets from the National Center for Education Statistics (e.g., BPS, NPSAS, IPEDS, and NELS) and the Higher Education Research Institute at UCLA. For statistical tools, Dr. Kim has been utilizing numerous statistical methods which are appropriate to the research questions. The statistical software includes SPSS, Stata, HLM, and EQS. Dr. Kim has published (or accepted for publication) in prestigious peer reviewed journals in the field of higher education, including Harvard Educational Review, Research in Higher Education, Journal of Student Financial Aid, and Journal of Higher Education Policy and management. This project represents a significant expansion of Dr. Kim's work on financial aid policy for undergraduate students by examining the intersection of the amount of loans with race/ethnicity, field of study, and institutions at the graduate level, particularly for doctoral students.

In the future, Dr. Kim also plans to conduct similar types of analyses of the proposed study focusing on historical trends. It is crucial to understand historical context of higher education policy because policy is created in the political and economic context of the time.

Abbreviated Curriculum Vitae

<u>Education</u>
Ph.D.	University of California, Los Angeles, Higher Education and Organizational Change
M.Ed.	Seoul National University, Seoul, South Korea, Educational Administration (emphasis: economics of education)
B.A.	Korea University, Seoul, South Korea, French language and Literature (major), education (minor)

<u>Professional Experience</u>
2005-present	Assistant Professor, Department of Educational Leadership and Policy Studies, University of Kansas
2003-2005	Policy Analyst, National Association of Independent Colleges and Universities (NAICU)
2000-2002	Research Associate, Office of Residential Life, UCLA

<u>Publications</u>

- Kim, D. (in press). Multilevel analysis of the effect of loans on students' degree attainment: Differences by student and institutional characteristics. <u>Harvard Educational Review</u>

- Kim, D. (accepted for publication). Drop out or Transfer out: Unraveling the impact of financial aid on students' college departure pattern. <u>The Journal of Student Financial Aid</u>

- Rury, J. & Kim, D. (accepted for publication)

- Rury, J. & Kim, D. (accepted for publication). The Changing Profile of College Access: Enrollment patterns in the Postwar Era. <u>History of Education Quarterly</u>.

- Kim, D., & Eyermann, T. (2006). Undergraduate borrowing and its effects on plans to attend graduate school: Prior to and after the Higher Education Amendments of 1992. <u>The Journal of Student Financial Aid (36)</u>. 1.

- Anderson, E. & Kim, D. (2006). The unfinished agenda: Increasing the success of minority students in the STEM fields. Washington, DC: American Council on Education.

- Kim, D., & Eyermann, T. (2006). Undergraduate borrowing and its effects on plans to attend graduate school: Prior to and after the Higher Education Amendments of 1992. The Journal of Student Financial Aid (36). 1.

- Anderson, E. & Kim, D. (2006). The unfinished agenda: Increasing the success of minority students in the STEM fields. Washington, DC: American Council on Education.

- Kim, D. & Lee, J. J. (2006), *Refinancing the College Dream: Access, Equal Opportunity, and Justice for Taxpayers,* Book review, Journal of College Student Development, Vol. 47, No. 1.

- Kim, D. (2004). The effects of financial aid on college choice: Differences by Racial Groups. Research in Higher Education (45) 1.

- Chang, M. J., Astin, A. W., & Kim, D. (2004) Undergraduate cross-racial interaction: Its educational relevance and the institutional factors that influence it. Research in Higher Education, (45) 5.

- Kim, D. (2003). Does parental income determine the effect of loans on students' persistence? Journal of Student Financial Aid (33). 2

- Kim, D. (2002). What high school students and their parents expect from higher education? A case study of South Korea. Journal of Higher Education Policy and Management (24) 2.

- Kim, D. (2002). Does borrowing money influence students' degree attainment in four-year colleges and universities? Institute for Higher Education Law and Governance Monograph (02-04). Houston: University of Houston Law Center

Research Grants & Scholarship
- Junior Faculty Research Grant (2007). University of Kansas ($8,000)

- Research Grant from the National Association of Student Financial Aid Administrators (NASFAA) (2004-2005). "Drop out, stop out, transfer out: Unraveling the impact of financial aid on students' college departure patterns." ($3,400)

- American Educational Research Association (AERA) Dissertation Grant (2002-2003). "Multilevel Analysis of the Effects of Loans on Students' Degree Attainment: Differences by Race, Parental Income and Institutional Affiliation." ($15,000)

- Association for Institutional Research (AIR)/National Center for Education Statistics (NCES)/National Science Foundation (NSF) Dissertation Grant (2002-2003). "Multilevel Analysis of the Effects of Loans on Students' Degree Attainment:

Differences by Race, Parental Income and Institutional Affiliation*" Cameron Fincher Award [outstanding proposal of the year*] ($15,000)

- UC Chancellor's Dissertation Year Fellowship (Merit based) (2002-2003). Graduate Division at UCLA ($23,000)

- Research Grant from the Center for Studies in Higher Education at University of California, Berkeley (2002). "Does Financial Aid Matter on Students' College Choice?" ($5,000)

- Research Grant from the National Association of Student Financial Aid Administrators (NASFAA) (2002). "The Effects of Financial Aid on Students' College Choice: How much is enough?" ($800)

- Departmental Scholarship (Merit based) (1999-2001). Graduate School of Education at UCLA ($22,000)

- Research Grant from the Center for Pacific Rim Studies at University of California "The Differences in the Financial Structure between School of Medicine at UCLA and that of Seoul National University." ($3,000)

Budget

A. Personnel
   Principal Investigator (Dongbin Kim)
      Summer 2007 Salary (2/9 of academic year salary) $11,122
      2007/08 Salary @ .10 FTE
      (estimated 5% increase in salary) $5,235

   Graduate Research Assistant (Cindy Otts)
      $15.50/hour @ 10 hr/wk for 6 Mo. $4,031

   Sub-total of Personnel $20,408

B. Fringe Benefits
   Principal Investigator (Dongbin Kim)
      28% faculty and staff $4,586
      4% students (employed 75% or less) $161

   Sub-total of Fringe Benefits $4,747

C. Travel
   2008 AIR Conference
   (Principal investigator and graduate research assistant for 3 days)
      Airfare & transportation $1,090
      Lodging (3 nights for 2 rooms) $900
      Per diem $264

   Sub-total of Travel $2,254

D. Tuition
   Graduate student (fall 07 and spring 08) $2,591

   Sub-total of Tuition $2,591

Total Project Costs $30,000

Budget Justification

Personnel: $20,408
<u>Dongbin Kim, Ph.D.</u>, (1 FTE for 2 months) will serve as the Principal Investigator. Dr. Kim will oversee the project to ensure that the goals and objectives of the project are met. She will also develop the written reports related to the project. We request 2 months 2007 summer salary, which totals no more than two-ninths of her regular academic-year salary. We request compensation for .10 FTE calendar months of her time, the equivalent of one course release for Spring Semester 2008.

<u>Cindy Otts</u>, (.25 FTE for 6 months) an advanced doctoral student majoring in Higher Education, will assist Dr. Kim in carrying out the proposed research. We request $4,031 at the University approved rate of $15.50 per hour for her support.

Fringe benefits: $4,747
Fringe benefits are requested at the approved University rate of 28% for full time faculty and staff, and 4% for students.

Travel: $2,254
These funds are requested for Dr. Kim and Ms. Otts to attend the AIR Forum. This request includes the following:
- Airfare/transportation - $1,090 (2 x $545)
- Per Diem - $264, calculated at the University approved rate of $44 per day (2 x 3 days x $44/day)
- Lodging - $900 (2 x 3 nights x $150/night)

Current and Pending Support

The principal investigator has no current or pending support for this project.

Facilities, Equipment and Other Resources

Currently, I have access to a computer, which complies to all the security guidelines

outlined in the NSF restricted Use Data License. I have been communicating with the director of

the Doctorate Data Project at NSF and received an approval for all the variables that I will use in

the proposed project. A license to access the restricted data files will be submitted by the investigator within a short time period.

Special Information and Supplementary Documentation

Not applicable to the proposed study.