1. Proposal Cover Page

2005 AIR/NPEC RESEARCH GRANT/DISSERTATION PROPOSAL

A Generation on the Move: Education and Economic Attainment of
Four-year College Transfer Students

Data set of interest
National Education Longitudinal Study of 1988 (NELS: 88/2000)
And Postsecondary Education Transcript Study (PETS)

Grant Amount Requested: $14,980

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2. Project Summary

The four-year college transfer and temporal schooling interruptions compose many new college attendance patterns, but little is known about their effects on student attainment. The proposed study will advance our knowledge on this topic by examining why four-year students switch institutions and how they fare comparing to non-transfer students in terms of bachelor's and overall degree completion and post-school earnings.

The current project makes three contributions. (a) It focuses on four-year college students who transferred to other four- or two-year institutions; and (b) it relates student degree completion and labor market outcome to college transfer and other pathway factors including delayed entry, schooling interruption and part-time enrollment; and (c) it corrects for selection bias in attainment model.

Using National Education Longitudinal Study of 1988 (NELS: 88/2000) and Postsecondary Education Transcript Study (PETS) data, this study estimates a discrete choice model to predict college transfer, dropout and graduation, and develops a binary logit model for degree attainment with correction for selectivity bias. A separate OLS model is used to estimate annual earnings.

By identifying components of the new college attendance patterns that influence student graduation and earnings, this study suggests ways to equalize their education and economic attainment by adjusting their involvement in transfer and other educational pathways. In particular, the findings inform college leadership on how to facilitate transfer student's persistence and improve their degree completion. In addition, this study will help policymakers to increase the retention and graduation rates of public institutions sending and/or receiving large proportion of disadvantaged transfer students.

3. Table of Content

4. Project Description

a. Statement of Problem

Nearly three decades ago Bolwes and Gintis (1976) warned Americans about the closure of educational frontier in an era when more than half of high school graduates entered into college. Their observation that equalizing education opportunity does not guarantee equal educational and labor market attainment still holds today (Brint & Karabel, 1989; Lavin & Hyllegard, 1996). While college attendance rate rises, the baccalaureate completion rate has been stagnant for decades (Adelman, 2003). In particular, disadvantaged students disproportionally drop out of four-year institutions (Pascarella & Terenzini, 1991).

To improve student success, the recent policy debate has shifted from increasing college access to increasing persistence and degree completion (Ewell, Schild, & Paulson, 2003). Researchers construct several institutional persistence models based on the experiences of "traditional" four-year students, those who continuously enroll in single institution (Bean, 1985; Cabrera, Nora, & Castaneda, 1993; Nora & Cabrera, 1996; Tinto, 1993). These institutional persistence models pay hardly any attention to students taking non-traditional pathways, including switching institutions. The lack of knowledge is unfortunate considering non-traditional students now account for nearly half of the undergraduate population (Adelman, 2003; McCormick, 2003).

There is a small but growing literature focusing on four-year college students who experience non-traditional pathways such as transferring, delaying college entry, combining working and schooling, and stop out (Kearney, Townsend, & Kearney, 1995; McCormick & Carroll, 1997). Observers of higher education refer to their college

attendance patterns as "swirling" among postsecondary institutions (Bach et al., 2000; De los Santos Jr & Wright, 1990; Rab, 2004). There are two challenges facing research in this vein. First, the issue of persistence is more complicated for transfer students. The linear progression from college entry to graduation is replaced by more complex attendance patterns. The institutional persistence models are less relevant for transfer students which necessitates a new model to predict their transfer and graduation decisions.

In addition, there is a lack of knowledge on the impact of college transfer on degree completion and earnings. Only a handful of studies have investigated the role of college transfer in stratifying student outcomes. The limited evidence reveals an equivocal transfer effect on timely degree completion (Rab, 2004) and post-school earning (Light & Strayer, 2004).

The current study is based on the assumption that understanding why students switch institutions and what they achieve after transferring is crucial to formulate relevant policies to increase retention and graduation of disadvantaged students. The proposed study develops a discrete choice model to predict college transfer, a binary logit model to estimate bachelor's and overall degree attainment for four-year college students, and an OLS model to estimate their annual earnings with the NELS: 88/2000 data and its supplement PETS data. The study contributes to existing literature by focusing on a group of less studied college students and by associating degree attainment and labor market outcome with various college attendance patterns. The findings inform institutional researchers, college administrators and policymakers ways to improve the success of non-traditional students and the performance of public institutions hosting many of those students.

b. Review of Literature and Empirical Model

College Transfer Recent NCES surveys reveal 57 percent of high school class of 1992 attended more than one college (Adelman, Daniel, Berkovits, & Owings, 2003) and 28.3 percent of four-year beginners of 1989 transferred to another college (McCormick & Carroll, 1997). Unfortunately existing transfer studies focus on two-year college students and little is known about why four-year students switch institution.

I develop a college transfer model based on institutional persistence literature. Most persistence models are based on student's experience in single institution with continuous enrollment, for instance, Tinto's student integration model (1993), Bean's student attrition model (1980) and Nora and Cabrera's student adjustment model (1996). These models identify several key factors in determining first college stop out, transfer, drop out or graduation (DesJardins, Ahlburg, & McCall, 1999), such as individual characteristics and high school performance, academic and social integration (Cabrera et al., 1993; Tinto, 1993), institutional commitment (Bean, 1985), financial constraints (St. John, Paulsen, & Starkey, 1996) and environment factors (Bean, 1985; Nora & Cabrera, 1996). However, the empirical studies based on these models leave substantial variation in the probability of transfer unexplained (Kocher, 1989; Rab, 2004).

In the proposed study, I utilize a multinomial logit model to predict horizontal and reverse transfer, dropout and graduation among four-year college entrants. The theoretical model is outlined in figure 1 of the appendix. Stuent transfer decision is hypothesized to be influenced by their pre-college characteristics, college performance and educational pathway factors, selectivity and control of initial institution, and quantity and price of in-state institutions.

The chance of transfer varies with institution selectivity and control. Stratification study shows students from non-selective public institutions are at higher risk of transferring (Rab, 2004). Individuals from highly selective private institutions are less likely to transfer, either due to high initial student-institution fit or high costs of withdrawing (Pascarella & Terenzini, 1991). College transfer is also constrained by access to and costs of other in-state two- and four-year colleges. Assuming utility-maximizing students make transfer decision based on expected costs and benefits from switching institutions (Light & Strayer, 2004), the supply-side factors such as quantity and price of alternative institutions also leverage such decision (Cheslock, 2001).

Lastly, previous attendance patterns can influence transfer decisions indirectly (Altonji, 1993; Comay, Melnik, & Pollatschek, 1973; Manski, 1989). Students delay entry, stop out or combine working with studying in order to release temporal financial constraint or respond to uncertainty and inter-temporal variation in the relative prices of leisure and schooling (Griliches, 1977; Light, 1996; Marcus, 1984). As such, these attendance decisions may change resource constraints and opportunity costs facing students who are about to make transfer decision.

Degree Completion   Four-year non-transfer students are twice as likely as transfer students to finish bachelor's degree (McCormick, 2003). With few exceptions (see for instance, Rab, 2004), little is known about the role of college transfer in stratifying educational attainment. Two theoretical frameworks are relevant for such analysis. The social reproduction theory indicates social class directly influences college attendance pattern and adjusts attainment indirectly (Rab, 2004). The low degree attainment of transfer students is a combination of their modest socioeconomic origin and

frequent involvement in non-traditional pathways. There is also economic impetus for switching institution and college transfer is an analogue to job turnover in labor market (Jovanovic, 1979). Students transfer in order to increase student-institution match and degree completion and a productive transfer should leverage degree attainment (Light & Strayer, 2004). In addition, college transfer may influence graduation indirectly by changing the selectivity of graduation institution (Hilmer, 2000, 2002).

I integrate the two theories by constructing a degree attainment model including controls for individual socioeconomic background as well as selectivity of graduation institution, transfer status and educaztional pathway factors. The proposed degree completion model is presented in figure 1 of the appendix. Available evidence suggests college transfer associates with reduction in timely degree completion (Kocher, 1989; Kocher & Pascarella, 1990). Using High School & Beyond data, Adelman (1999) found that college students attending multiple institutions were less likely to complete bachelor's degree. Rab (2004) observed the negative transfer effect is particularly detrimental for students with low socioeconomic status. Other pathway factors reinforce negative transfer effect. For instance delayed college entry is negatively associated with degree completion (Ahlburg, McCall, & In-Gang, 2002; DesJardins et al., 1999) and the schooling interruption lowers degree attainment (Adelman, 1999; Rab, 2004).

There are two problems unresolved in the previous literature. First, some university students transfer downwardly to find a better student-institution match and graduate with associate degree or certificate (Light & Strayer, 2000). By narrowly focusing on bachelor degree attainment, existing studies overlook transfer effect on overall degree completion. I reconcile this problem by including both measures of

attainment. Furthermore, students may self-select into transfer group based on expected costs and benefits of switching. Researchers fail to address the endogeneity of transfer status due to such self-selection in degree model. I tackle the problem by introducing a two-stage procedure to correct for selectivity bias (Heckman, 1979; Lee, 1983).

Labor Market Payoffs   The role of college transfer in determining labor market payoffs is ambiguous. The social reproduction theory implies transfer is harmful to labor market payoffs (Kocher & Pascarella, 1990) by lowering bachelor's degree completion (Rab, 2004) and the returns to some college credits without degree are much lower than that for college credentials (Jaeger & Page, 1996). In contrast, the human capital theory suggests transfer is economically beneficial. Transfer either leverages selectivity of graduation institution or student-institution match, both lead to increase in degree attainment and post-school earnings. Meanwhile a college transfer also allows students to invest on job-related skills with high market payoffs (Light & Strayer, 2004).

I test the implications of two theories by controlling college transfer status, bachelor's degree attainment and their interaction term, and graduation institution quality in earning equation. The social reproduction theory implies the coefficient on interaction term (measuring return to transfer) should approach zero after teasing out impact of degree attainment. I also include student gender, race, in-school and out-of-school working experiences and their squares in earning equation (see figure 1 of the appendix).

The transfer effect on earnings is equivocal. Controlling for pre-college characteristics, selectivity of initial institution and one's academic and social experiences at final institution, four-year transfer was found to negatively influence annual earnings for white and black males and females (Kocher, 1989; Kocher & Pascarella, 1990).

Recent study suggests net of individual's gender, race, working experience, AFQT score, college availability and cumulative enrollment duration, transfer students with bachelor's degree earned an additional six percent wage premium over non-transfer college graduates (Light & Strayer, 2004). Selectivity of graduation institution and pathway factors gauge earnings, too. Graduates from selective institutions tend to receive higher earnings (Brewer & Ehrenberg, 1996; Eide, Brewer, & Ehrenberg, 1998). While delayed college entry lowers wages growth (Light, 1995), part-time enrollment increase earning through increasing in-school experience (Light, 2001).

There are two challenges remained. First, college transfer status and degree attainment are endogenous in earning equation. I correct this bias by controlling for observed measures of family characteristics and ability (Kane & Rouse, 1995; Light & Strayer, 2004). Second, existing studies omit the effect of non-traditional pathway factors, which may lead to upward-biased estimate on return to education. This study will account for the bias by including three pathway factors directly in the earning equation.

c. Proposal of Work

The focus of the proposed study is to identify the determinants of four-year college transfer and to predict degree attainment and post-school earnings of university transfer students using NELS: 88/2000 and PETS data (see Figure 1 of the appendix for theoretical models). The main research questions include:

1. What affect four-year college student's probability to transfer? Do students from different socioeconomic and race groups have same likelihood of transferring?

2. What is the impact of college transfer on bachelor's degree attainment? Does the effect vary with student's race and socioeconomic status?

3. Do the wages of workers with identical college degree vary with their college transfer patterns?

Data Base and Sample

The data used for this study is selected from NELS: 88/2000 and PETS data files. The NELS: 88/2000 is a longitudinal dataset, which follows a national representative sample of eighth graders of 1988 for twelve years. The students were resurveyed through four follow-ups in 1990, 1992, 1994 and 2000. The postsecondary transcripts information was collected in 2000 and it includes critical information on individual college attendance pattern (when, where and how students attend college) as well as their pre-college attributes and college performance. One limitation of the data sets is they only followed students for eight and half years after estimated high school graduation. Transfer students are more likely to remain in school in 2000 and therefore rightly censored. Besides, the data documents only student's early labor market experiences. This short observation period (three to four years after graduation) makes it a less desirable database for studying labor market attainment. The proposed study draws additional information concerning (a) institutional selectivity from Barron's Profile of American Colleges 1992, (b) numbers and tuition and fees of in-state four-year and two-year colleges from Digest of Education Statistics 1992 and 1993, and (c) other institution characteristics from the Integrated Postsecondary Education Data System (IPEDS) 1992-93 Institution Survey and Enrollment Survey.

Among 9,600 students attended at least one postsecondary institution, I retain 8,285 students who have complete postsecondary transcripts. Next, I exclude 2,637 two-year college entrants from sample. Of the remaining 5,622 four-year college beginners,

2,202 students (39 percent) switched institutions at least once within eight and half years after high school graduation and 3,420 never transferred. Among all 2,202 transfer students, 1,371 transfer to another four-year institution (horizontal transfer) while 831 moved to two-year colleges (reverse transfer).

Research Variables

Dependent Variable

A list of variables from NELS: 88/2000 and PETS data sets are included in table 1 of the appendix. The dependent variables in transfer model include horizontal transfer (a dummy variable equals to one if transferring to another four-year institution and zero otherwise), reverse transfer (a dummy variable equals to one if transferring to a two-year or less-than-two-year institution and zero otherwise), dropout and graduation. The variables are constructed from original variables such as first true institution attended (REFINST), combination of institutions attended (INSTCOMB), number of postsecondary institution attended (TRANRCUG), and highest degree attainment (HDEG). For the attainment model, the bachelor's and overall degree attainment are constructed from highest degree attainment (HDEG). The annual income in 1999 (AE99) is used to determine the post-school earnings as of 1999.

Independent Variable

I include four sets of variables in college transfer equation, including (a) student characteristics and family background (gender, race, educational expectation of 1992, parental education, household income of 1992) and academic ability and high school resources (senior year composite test score quintile, SAT/ACT score quintile, high school academic curriculum intensity quintile); (b) individual college experience (first year GPA,

college major, and educational pathways—delayed entry, interrupted enrollment, part-time enrollment); (c) initial institutional characteristics (control and selectivity of first PSE institution, HBCU or HSI); and (d) environment factors (number and tuition and fees of in-state four- and two-year institutions, and local unemployment rate).

For degree completion equation, I add individual's pre-college attributes, three dummy variables for pathway factors, two dummy variables representing horizontal and reverse transfer, and two dummies for selectivity of graduation institution. In the earning equation I control for pre-college experience, three pathway factors, in-school and out-of-school working experiences and their squares, graduation quality, degree attainment and its interactions with transfer dummy variables.

Analysis

First, I estimate a multinomial logit model based on a sample of all four-year college entrants with four outcomes: dropout, horizontal transfer, reverse transfer, or graduation. Following Hilmer (1997) and Manski and Wise (1983), I assume the "Independent Irrelevant Alternative" assumption holds. I estimate first with pooled sample and then for high vs. low SES groups and White vs. non-White groups with proposer sample weight. The multinomial logit model is preferrable because it allows effect of same predictor to vary across outcomes. To estimate the likelihood of degree completion, I develop separate binary logistic model for bachelor's and overall degree attainment. Again I estimate with pooled sample and then for low-SES and non-White sub-samples. For above models, I compute relative risk ratios and marginal effects with appropriate adjustment for complex survey design (cluster and strata) and apply

likelihood ratio test and calculate pseudo R-square to show appropriateness of the specification and goodness-of-fit of the model.

In line with previous studies on return to education, I calculate a semi-log annual earning function using OLS with control for work experience, college attendance pattern and degree attainment (Kane & Rouse, 1995; Light & Strayer, 2004). The proper sample weights (with cluster and strata) will be used and the software for analysis is STATA.

The major methodological challenge is to deal with the endogeneity of transfer status in degree equation. The issue is largely due to individual self-select into transfer and non-transfer groups based on expected costs and benefits of transferring. The correction for selection bias involves a system of two equations (Heckman, 1979): a selection equation and a outcome function with a Heckman-type selection term as one independent variable (Hilmer, 1996; Zhang, 2003). This study uses Lee's (1983) generalized method to calculate the selection term for each group from the college transfer model (selection equation). After that, it will re-estimate the degree attainment model (outcome equation) with the selection correction term as a predictor. The transfer model is identified by including characteristics of first college attended and number and tuition and fees of in-state two-year and four-year institutions, which are assumed to be correlated with transfer decision but not final degree completion. To deal with the endogeneity of transfer status and degree attainment in earning function, I simply follow Light and Strayer (2004) to control for observed student ability and family characteristics.

d. Dissemination Plan

The study will be the major component of the author's dissertation. Findings from the study will be disseminated through national conference presentations and scholarly

publications. The results will be communicated to institutional research community at the Association for Institutional Research Annual Forum 2006 at New Orleans, LA. The paper will also be submitted to conferences sponsored by the Association for the Study of Higher Education and The American Educational Research Association. Scholarly papers based on this study will be submitted to peer-review journals including Research in Higher Education, Economic of Education Review and Journal of Higher Education.

e. Description of Policy Relevance

The university transfer students become a fast growing group including a high proportion of students from low socioeconomic background and non-selective institutions. These students are double-disadvantaged by their modest socioeconomic origins and convoluted educational pathways. Increasing persistence and graduation of these students is vital to equalize educational and economic attainment in society (Ewell et al., 2003).

The current study intends to bridge the knowledge gap in this vein. First with the knowledge of determinants of student's transfer decision and factors influencing their graduation, college administrators can development effective retention policy, curriculum, financial aid package and counseling services to adjust students' attendance decisions or accommodate the needs of incoming transfer students (Borden, 2004; Pusser & Turner, 2004). Besides policymakers can re-evaluate current performance indicators on institution retention and graduation rates based on findings of this paper and help public institutions that sending or receiving large proportion of disadvantaged transfer students.

f. Innovative Aspects of the Project

This study seeks to make both substantive and methodological contributions. It differs from previous studies in four aspects. First, the study concentrates on four-year

transfer students whose behaviors are beyond the explanatory power of institutional persistence models. It explores a new model to emulate student's transfer decision and attainment process. Second it extends the concept of "student success" from bachelor's degree attainment to overall degree completion and labor market payoffs, which have largely been ignored by existing literature (see exception, Light & Strayer, 2004). Furthermore, the study relates student attainment to a serie of college attendance decisions such as horizontal and reverse transfer, delayed entry, schooling interruption, and part-time enrollment. In particular, it brings about a better understanding on the role of college transferring in stratifying education and economic attainment. Finally, the proposed study intends to improve upon existing literature methodologically by directly addressing the selection bias. The Heckman two-stage procedure will account for the endogeneity of transfer status in degree attainment model and produce unbiased estimates.

g. Audience to Whom Project Will be Important

The emergence of new attendance patterns challenges the institution-based persistence theories and retention policies of colleges and universities, as well as performance measures at system or state level. The main findings of current study inform policy debate and suggest ways institution and state policymakers can utilize to improve the success of transfer students taking non-traditional pathways. For example, the study allows institutional researchers and administrators to use its findings to develop new strategies to improve persistence and graduation of their incoming transfer students. It will also help policymakers to design institution articulation agreements, in order to reduce attrition rates at public institutions which are the major senders and receivers of four-year transfer students.

Appendix

Table 1   Variables to be used (NELS: 88/2000 PETS data and data from other sources)

Variables	Description	NELS Label
Dependent Variable		
Educational Attainment	Horizontal transfer (four- to four-year); reverse transfer (four- to two-year)	TRANRCUG, INSTCOMB, REFINST
	Bachelor's degree completion	HDEG
	Overall degree attainment	HDEG
Labor Market Attainment	Annual Earning of 1999	HSINCM99, AE1999
Independent Variables		
Individual Characteristics and Family Background		
Gender	Gender	COMPSEX
Race	Race/ethnicity	RACE4
Educational Expectation (1992)	Educational expectation in 1992	EDEXP92
Parental education	Highest level of parent education	PARED
Household income (1992)	1991 Family income from all sources	FAMINC92
Academic Ability and High School Performance		
12th grade composite score	Senior test quintile (reading and math)	SRTSQUIN
SAT/ACT score	Combination of ACT/SAT/PSAT	SATREV
High school academic resources	HS academic curriculum intensity quintile	ACCURHSQ
College Experience		
1st year GPA	GPA in 1st calendar year of attendance	GPA1
College major	College major	MAJCOD1-MAJCOD4
Delayed enrollment	Delay of entry to postsecondary education	DELAYTRI
Interrupted enrollment	Discontinuity of enrollment	CONTIN
Work while study	Working at least part-time during enrollment period	Self-constructed from monthly enrollment count
Labor Market Experience		
In-school working	Number of years working while studying	Self-constructed
Years of working	Number of years of full-time working	Self-constructed
Initial Institution Characteristics		
Control	Control of 1st institution (public vs. private)	Self-constructed from IPEDSID and LEVLCONT
Selectivity	Selectivity of the 1st institution attended (highly selective, selective, non-selective)	REFSELCT
HBCU or HSI	Institution type is either HBCU or HSIS	Self-constructed
Graduation Institution Characteristics		
Selectivity	Selectivity of degree granting institution (highly selective, selective, non-selective)	SELECT1 to SELECT4
Environmental Factors		
Tuition & Fee Four-year	Average in-state public 4-year tuition &fees	Self-constructed from Digest of Edu Statistics (DES)
Tuition & Fee Two-year	Average in-state public 2-year tuition &fees	Self-constructed from DES
Four-year In-state	# of public four-year institution in-state	Self-constructed from DES
Two-year In-state	# of public two-year institution in-state	Self-constructed from DES
Unemployment rate in-state	Unemployment rate of state where student attended high school	Self-constructed from BLS

Figure 1   Theoretical Models for Proposed Study

Model I. College Transfer
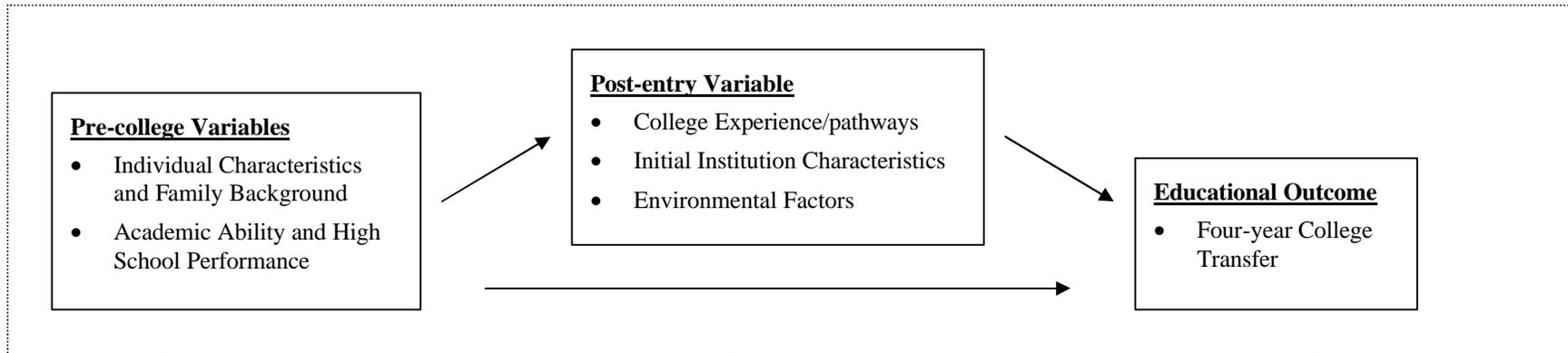
Model II. Educational and Economic Attainment
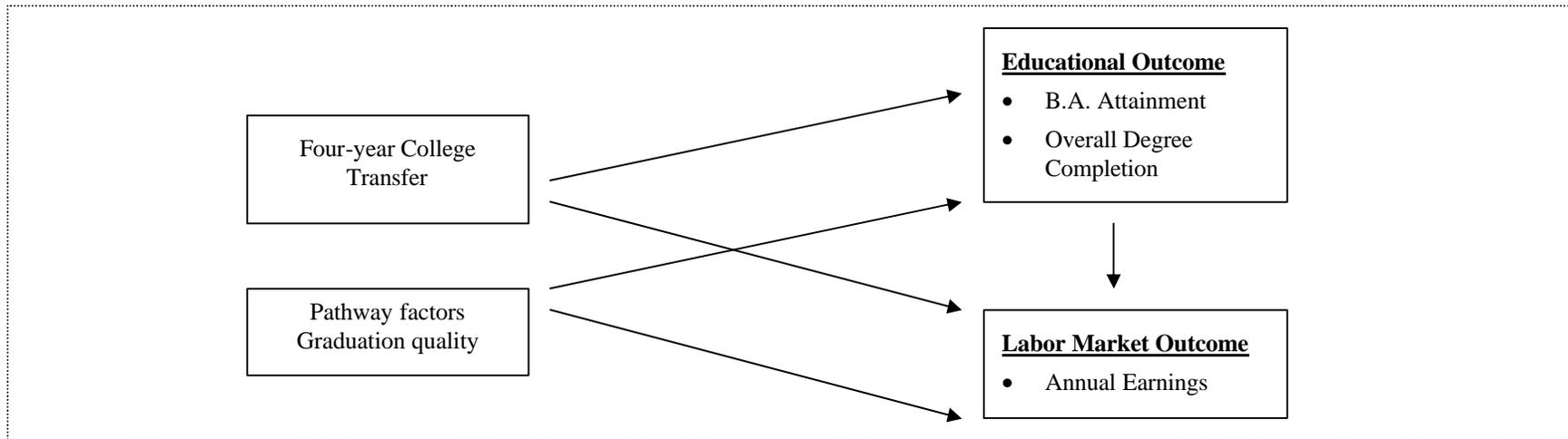
Note: Refer to Table 1 for a list of variables selected (NELS: 88/2000 and PETS)

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6. Biographical Sketches

Doctoral Student: Po Yang

I received my bachelor's degree in Economics and master degree in Economics and Education from Peking University, P.R. China. In September 2002, I joined the doctoral program in the Department of International and Transcultural Studies at Teachers College, Columbia University and major in Economics and Education.

My research interests focus on economics of higher education and stratification within postsecondary education sector, with special interests on community college and four-year college students taking non-traditional pathways. I am interested in applying human capital theory and social reproduction theory to the study of college choice, attendance pattern and outcomes. My dissertation will conceptualize the influences of individual, institution and environment factors on individual choice of college attendance pattern and their subsequent achievement.

In the past two years, I have taken several statistics courses which covering multivariate regression analysis, general linear model, categorical data analysis, event history analysis and multilevel models. In 2003, I was selected and fully funded to attend the AIR Summer Data Policy Institute. I gained extensive knowledge on longitudinal surveys administrated by NCES and NSF from the Summer Institute. As a research assistant at Community College Research Center, Teachers College, I have had opportunity to work intensively with several national representative data sets, including BPS: 89/94 and BPS: 96/01, HS&B, IPEDS, NAPSAS, and NELS: 88/2000 (which I will use for my dissertation), to conduct research on attainment of community college students and to evaluate institutional performance. For instance, I finish a research on the

effect of college tuition and fees and other institutional characteristics on probability of community college transfer with BPS: 89/94 data and IPEDS Enrollment and Institution surveys. I also investigate how horizontal transfer changes student's odds of bachelor's and associate degree attainment using logistic model with NELS: 88/2000 sample. In addition, I worked with colleagues to build up a benchmark model for community college based on institutional data from SUNY Office of Institutional Research and IPEDS PEERS system as well as 2000 U.S. Census.

With the support from my advisor and colleagues, I have finished several independent researches, participated in some professional development programs, and presented in a few national conferences (including ASHE and AACC) as suggested by the attached curriculum vitae. I expect to complete all departmental requirement as of May 2005 and advance to candidacy by that time. I have made significant progress towards my dissertation as documented in this proposal.

The AIR/NPEC Focus Grant (Dissertation Grant) will help me to obtain necessary software to conduct statistically analysis and to work extensively on my dissertation study during the Grant period. In addition, it will help me to participate professional conferences and prepare manuscripts for publication, as ways to disseminate my studies to institutional researchers community and academia in large. I will take this opportunity to develop my research skills and contribute to the scholarship on attainment of non-traditional four-year college students and community college students in near future.

Po   Yang

EDUCATION:

Columbia University, Teachers College   New York, NY
Ph.D. Student, Economics and Education   Expected May 2006
Peking University, Graduate School of Education   Beijing, P.R. China
MA in Economics and Education   July 2001
Peking University, College of Economics   Beijing, P.R. China
BA in Economics   July 1999

FELLOWSHIP:

Teachers College Tuition Scholarship, Columbia University,   09/2002-05/2004
Graduate Student Fellowship, SUNY-Albany,   09/2001-05/2002

WORK EXPERIENCE:

Research Assistant, with Prof. Thomas Bailey, Community College Research Center, Teachers
          College, Columbia University, New York, NY,   09/2002-05/2004

Short Term Consultant, with Dr. Lianqin Wang, Human Development Network, The World Bank
          Group, Washington, D.C.,   06/2002-09/2002, 06/2003-09/2003

Research Assistant, with Dr. Joseph Burke, Rockefeller Institute of Government, SUNY Research
          Foundation, Albany, NY,   09/2001—05/2002

PRESENTATIONS:

Yang, Po. 2004. "The Way You Took matters: A Test for College Transfer Shock." Presented at
          the 2004 Annual Meeting of Association for the Study of Higher Education, Kansas City,
          MO.

Yang, Po. 2004. "Community College Attendance or College Transfer Shock: Which Leverage
          Educational Attainment?" Presented at the 46th Annual Conference of Council for the
          Study of Community College, American Association of Community College,
          Minneapolis, MN.

Yang, Po. 2003. "Transfer Performance of Community College Students: Impacts of Costs and
          Institution". Presented at the 2nd biennial conference on Articulation & Transfer,
          University of South Florida and Hillsborough Community College, Tampa, FL.

Yang, Po. 2003. "Do Institutional Characteristics Matter in Two- to Four-year Transfer?"
          Presented at the 45th Annual Conference of Council for the Study of Community College,
          American Association of Community College, Dallas, TX.

PUBLICATIONS:

Burke, Joseph C., Henrik Minassians, and Po Yang. 2002. "State Performance Reporting
          Indicators: What Do They Indicate?" *Planning For Higher Education*, 31 (1), 15-29.

Yang, Po, (Forthcoming). "Transfer Performance of Community College Students: Impacts of Costs and Institution". (Revise and resubmit, *Journal of Applied Research in the Community College*)

PROFESSIONAL DEVELOPMENT:

AIR Summer Data Policy Institute, organized by Association for Institutional Research, National Center for Education Statistics, and National Science Foundation, Washington, D.C., June, 2003.
IHS Social Change Workshop for Graduate Students, organized by Institute for Humane Studies, University of Virginia, Charlottesville, VA, June, 2003.
"The Complex Community College" Conference, organized by Cornell Higher Education Research Institute, Cornell University, Ithaca, NY, October 13-14, 2003
Community College Research Center Seminar Series, Teachers College, Columbia University, September 2002 to date.
Applied Microeconomics, Econometrics, Labor Seminar Series, Economics Department, Columbia University, September 2003 to date.

TECHNICAL SKILLS

Applications: MS Word, Excel, PowerPoint, Access, STATA, SPSS, HTML, website design, SAS (data processing)

Language: Chinese (native), English (fluent)
Germany and Spanish (reading knowledge)

Faculty Dissertation Sponsor: Thomas R. Bailey, Ph.D.

Thomas Bailey is the George and Abby O'Neill Professor of Economics and Education in the Department of International and Transcultural Studies at Teachers College, Columbia University. Dr. Bailey holds a PhD in labor economics from MIT, and is an expert on the economics of education, educational policy, community colleges, and the educational and training implications of changes in the workplace.

Since 1996, with support from the Alfred P. Sloan Foundation, Dr. Bailey established the Community College Research Center (CCRC) at Teachers College, which conducts a large portfolio of qualitative and quantitative research based on fieldwork at over 50 community colleges and analysis of national- and state-level datasets. As Director of CCRC, Bailey has led a team of researchers conducting a National Field Study of Community Colleges, which has examined eight research topics at 15 community colleges across the country. Dr. Bailey is also conducting a major quantitative study with the U.S. Department of Education on the National Assessment of Vocational Education (NAVE), which analyzes data on the characteristics and educational and economic outcomes of postsecondary occupational students. In addition, Dr. Bailey has recently completed a project for the National Science Foundation, examining the institutional impact and sustainability of Advanced Technology Education (ATE) programs on community colleges.

Since 1992, Dr. Bailey has also been the Director of the Institute on Education and the Economy at Teachers College. His articles have appeared in a wide variety of policy-oriented and academic journals, and he authored or coauthored several books on the employment and training of immigrants and the extent and effects of on-the-job

training. His latest book, Working Knowledge: Work-Based Learning and Education Reform (forthcoming), co-authored with Katherine Hughes and David Moore, examines the costs and educational benefits of internships and other forms of work-based learning. Manufacturing Advantage (2000), written with Eileen Appelbaum, Peter Berg, and Arne Kalleberg, analyzes the effects of high performance work systems on organizational performance and worker welfare. The Double Helix of Education and the Economy (1992), co-authored with Sue Berryman, examines the poorly understood link between the needs of the workplace and the contemporary understanding of effective learning.

Dr. Bailey has served as a consultant to many public agencies and foundations including the U.S. Department of Labor, the U.S. Department of Education, the U.S. Congress Office of Technology Assessment, the Alfred P. Sloan Foundation, the William T. Grant Foundation, and several state and local economic development and educational agencies.

7. Proposed Budget

TITLE OF RESEARCH: A Generation on The Move: Education and Economic Attainment of Four-year Transfer Students

Category	Requested Funds
Personal Salaries	
Po Yang – 12 months @ $1,100 month	$13,200
Travel	
Domestic (AIR conference, Association for the Study of Higher Education conference, American Educational Research Association)	$1,200
Other Direct Costs	
Materials and Supplies (Software, Printing, Photocopies, Research Related Books, Dissertation Dissemination)	$580
Total Amount of Award	$**14,980**

8. Current and Pending Support

The researcher is currently working as graduate assistant and received funding from Teachers College. However, the support will terminate at the end of 2004-2005 academic year. At this point, no support for the 2005-2006 academic year has been guaranteed. The researcher will apply for AERA/Lumina Dissertation Grant for 2005-2006 academic year.

9. Facilities, Equipment, and Other Resources

I, along with my faculty advisor, have obtained a restricted data license for the NELS: 88/2000 and PETS data files. I have a personal computer that holds all necessary statistical software and complies with the security guidelines outlined in the Restricted Use Data License. All of the resources available for use in Teachers College at Columbia University will be available for use in conducting the proposed study. These resources include laser printers, photocopy machines, a research library, statistical and technology support, and two computer labs with the latest software and capabilities.

10. Special Information and Supplementary Documentation

Letter of Recommendation

Jan 10th, 2005

To: AIR/NPEC Focused Grant/Dissertation Fellowships Program
From: Thomas R. Bailey, George and Abby O'Neill Professor of Economics & Education
Re: Po Yang's recommendation

I am writing to provide a recommendation for AIR/NPEC to support Po Yang's dissertation research. Ms. Yang is a third year doctoral student in the Economics and Education Program with strong background in economics and quantitative methodology. I am her dissertation advisor and she has taken several courses with me during her studies. From the classes and our collaboration in several projects for the Community College Research Center (CCRC), Teachers College, she shows keen interests in her field and exceptional learning and research skills. In addition, her dissertation project will fill an important knowledge gap in study of college student persistence and success.

Academically, Po is one of the best doctoral students in our program. She is taking advantage of the interdisciplinary nature of our program by selecting advanced theory and methodological classes at Teachers College as well as Department of Economics, Department of Statistics, and School of International and Public Affairs of Columbia University, and receives excellent grades from those classes.

Except for extensive methodological trainings, Po has hand-on experiences with several NCES longitudinal database through her work at CCRC and training from other professional development opportunities, including AIR's Summer Data Policy Institute. She has worked with datasets such as BPS: 89/94 and BPS: 96/01, NELS: 88/2000, IPEDS as well as SUNY system's institution data. In the collaborative and independent

works, she demonstrated superb ability to synthesize theories with statistical analysis, which is valuable for the development of quantitative-oriented students.

Most importantly, Po's dissertation topic is very innovative and critical to the advancement of knowledge in this area. She is interested in the determinants of four-year students' transfer decisions and how college transfer with other educational pathways shape their subsequent educational and economic attainment, with special focus on low SES and high-achieving minority students. She proposes to combine human capital theory with social reproduction theory to provide a more relevant persistence and degree completion model for a new generation of four-year college students. In addition to the knowledge she will bring about through her study, the findings will inform policy discussions on improving the success of four-year students taking non-traditional pathways, most of them are disadvantaged minority students.

I strongly recommend approval of Po's application. The support from AIR/NPEC Focus Grant will provide her an important opportunity to develop her research potential and to contribute to scholarship in this vein of research in near future.

Sincerely

Thomas R. Bailey
George and Abby O'Neill Professor of Economics & Education