

Extended Abstract for PAA 2009 Annual Meeting

**Changing Racial Differences in College Attendance Patterns in the United States
- A Multi-State Life Table Approach**

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Changing Racial Differences in College Attendance Patterns in the United States
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Research Questions

There are persistent racial differences in educational attainments in the United States (Mare 1995), contributing to racial inequality in income and occupational outcomes (U.S. Department of Education 2001). Given the expansion of education, interest in racial disparity in opportunity and consequence of postsecondary schooling has been increasing (Bennett and Xie 2003; Weinberger 1998). College attendance patterns, however, have not been widely studied. This is unfortunate because racial difference in the college attendance patterns would account for racial disparity in degree completion and occupational outcomes among college graduates. Using the multi-state life table (MSLT) analysis and three longitudinal data sets (i.e. NLS-72, HSB, and NELS), this study examines how racial differences in patterns of college attendance changed between the 1970's and the 1990's. With this aim in mind, I attempt to answer the following research questions:

- *How prevalent were non-traditional enrollments, such as delayed enrollment, part-time enrollment and schooling interruption, among American college students between the 1970s and the 1990s?*
- *How frequent were transitions to part-time enrollment and schooling interruption?*
- *How did the African American student's attendance patterns differ from those of white students? Did racial difference change from a cohort to another?*

Previous Studies

African Americans are consistently found to be less likely to enter college, obtain a bachelor's degree and get high paying jobs compared to whites (Mare 1995; Kao and Thompson 2003). Because educational attainment and occupational status are critical dimensions of social stratification in contemporary American society, this racial gap has drawn much attention from social scientists and policy makers. Two approaches have been widely used. First, most studies explained racial differentials in educational and occupational outcomes as differences in socio-demographic composition. Studies consistently found that African Americans are at least as

likely as white to enter and complete college after controlling for family background and academic achievements (Alexander et al. 1987; Bennett and Xie 2003; U.S. Department of Education 2001). Nonetheless, earnings differentials between whites and blacks are not fully explained by family background and educational attainment (Kane 1994; Weinberger 1998). Therefore, many studies also examined if the impact of socioeconomic factors on educational and occupational outcomes differed by race. African American's advantage over white in terms of access to college education is only limited to economically disadvantaged blacks (Bennett and Xie 2003). Racial differentials in earnings are greater for higher status occupations, which suggest the possibility of racial differentials in the return to education (Grodsky and Pager 2001).

These studies help us to understand racial disparity in college entrance, degree completion, and returns to college education in labor market. However, thus far, trajectories of postsecondary schooling have been understudied and racial disparities in the trajectories of college education have been studied even less. This is despite the fact that there may be heterogeneity in postsecondary schooling trajectories, which may have serious implications for degree completion and occupational outcomes. That is, not everyone attends college right after they graduate from high school or continues their schooling without interruption, and this different pattern may affect educational and occupational outcomes. Some recent studies showed that delayed enrollment and enrollment interruption differed by race (Hearn 1992; Rowan-Kenyon 2007; DesJardins et al. 2002) and affect degree completion (Bozick and DeLuca 2005). These non-traditional attendance patterns would also affect the quality of postsecondary education received and performance in labor market. These studies, however, do not fully account for interdependency between these non-traditional states. Instead, most studies estimated separate models for each outcome such as delayed entrance, interruption, timely graduation and degree completion. For example, Bozick and DeLuca (2005) showed that (1) racial differentials in delayed entrance disappear after controlling for socioeconomic status and academic achievement and (2) delayed entrance has a detrimental effect on degree completion. The present study is different from the previous research in that it closely examines the patterns of delayed enrollment, part-time enrollment and interrupted schooling as a whole paying close attention to the interdependency between these states.

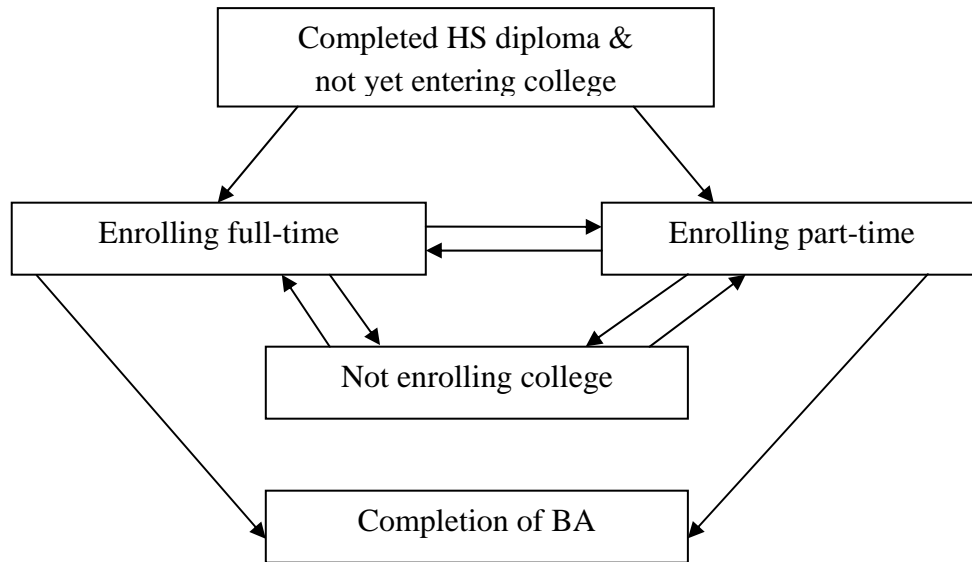
Data

This study uses three longitudinal surveys: The National Longitudinal Study of the High School Class of 1972 (NLS-72), The High School and Beyond Sophomore Sample (HSB), and The

National Education Longitudinal Study of 1988 (NELS). These surveys in common traced three nationally representative samples of high school seniors (72, 81 and 92 class) for 8 years after high school completion although later studies started following up respondents in earlier grades. Each survey includes information on enrollment status in each month. Using person-month data, I will estimate the MSLT for college attendance patterns in the United States.

Research Design

Figure 1 Multi-state Representation of College Attendance Patterns



In this study, I apply a multi-state life table (MSLT) analysis to examine college attendance patterns. Figure 1 shows how I will model the college attendance patterns. The analysis uses respondents *who completed high school diploma and ever went to college*.¹ In this model, *those who attended some college* are at risk of entering college as either a full time or part time student after graduating from high school. Upon entering college, they can transit among three states (enrolled full-time or part-time and not enrolled). Completion of bachelor’s degree is an absorbing state. Using the above mentioned longitudinal data sets, I will estimate the transition rates between states and person-year lived in each state for eight different samples: a pooled entire sample, a pooled white sample, a pooled black sample, entire samples for each cohort, and

¹ The sample also includes those who have not attended 4-year college. I include them in the sample because transfer from 2-year to 4-year college is possible. Given early right-censoring in this study (8 years after leaving high school), the inclusion of those who only attended 2-year college is reasonable because some of them were still *at risk of getting bachelor’s degree*.

separate samples by race for each cohort. The comparison of the MLST estimates across samples will show how the college attendance patterns depend on race and cohort. I follow Palloni (2001) to compute the MLST estimates.²

Expected Findings

First, I expect more prevalence of non-conventional attendance patterns among African Americans compared to whites because of racial differences in family background. I expect this to be the case in light of the fact that students with disadvantaged family background are more likely to enter college late and enroll part-time (Hearn 1992) and African Americans are more likely to originate from such families. This disparity in college attendance patterns would account for racial inequality in college completion and occupational outcomes. A full version of paper will discuss the implications of this inequality in more detail.

Second, I expect non-conventional attendance patterns are more prevalent among recent cohorts because enrollment to 2-year college has become more prevalent (Card and Lemieux 2000) and returns to college degrees have increased over time. According to Bryant (2001), 2-year college students are more heterogeneous in terms of age than 4-year college students. This implies that increasing enrollment to 2-year college over time would increase the proportion of those who delayed college entrance and experienced schooling interruption. Increasing return to college degree in labor market would also increase non-conventional enrollment patterns because recent cohorts who did not attend college right after high school graduation would have a stronger incentive to attend college than their earlier counterparts.

Finally, there would be changes in racial differences in non-conventional college enrollment patterns. I have no strong prediction about trends in racial differences. I will discuss the implications of the trends in racial disparity in college enrollment patterns in more detail in the full version of paper.

² Andrew and Cecilia (2006) did a similar study using the HSB and the NELS. Whereas they examined pattern of transfer between 2-year and 4-year college, the present study focuses on transitions between enrollment statuses.

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