# Work Matters: Consequences of High School Employment on College Attendance

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Extended Abstract

Can high school students successfully integrate employment with their studies? In most prior research, entry into educational institutions and entry into the labor market have been viewed as a *sequential* steps in the transition from childhood to adolescence and, ultimately, to adulthood. However, as researchers observed increasing rates of employment among high school students, conceptual models of school-to-work transitions have been broadened to reflect the reality that 50 percent of more of high school and college students are participants in the labor market. In recent decades, there has a vigorous, and sometimes confusing, debate on the nature of the effect of work on academic achievement, school attachment, and college attendance (Greenberger and Steinberg, 1986; McNeil, 1997; Schoenhals, Tienda and Schneider, 1998; Lee and Warren, 2003; Marsh and Kleitman, 2005). At the heart of the debate are the questions of selection and causality. For example, does teenage employment merely reflects the relationship between antecedent social origins and achievement, or does teenage employment have an independent effect on high school or postsecondary outcomes (Warren, LePore, and Mare, 2000). In this paper, we examine effects of teenage employment on college attendance, and find that the intensity as well as the quality (occupation type) of high school work exerts direct effects on the transition to college.

The adolescent employment literature continues to be rife with disagreement concerning the role of high school employment. One critical issue underlying the lack of consensus on the impact of adolescent employment is the (self) selection of students into employment (Schoenhals, Tienda, and Schneider, 1998; Warren, LePore, and Mare, 2000; Entwisle, Alexander, and Olson, 2000). In other words, if certain student characteristics (whether attitudinal or contextual) are directly related to both work patterns and postsecondary outcomes, then any differences observed between employed and non-employed students are due to these pre-existing differences. By controlling for characteristics potentially influencing both work patterns and college enrollment, we demonstrate that high school seniors' labor market experience exerts an effect on their postsecondary trajectory above and beyond that of other salient characteristics.

Much of the dialogue in the in the field of adolescent employment addresses the following question: Does having a job take time away from other important activities such as extra-curricular participation and homework? Does is deleteriously impact grades? Or, does it, in fact, allow young people to learn how to budget their time and be more responsible? Two competing conceptual models of the causal mechanism underlying the effect of employment have emerged, and both have found empirical support. For both of these, time spent working (or, work intensity) is a focal dimension largely responsible for producing differential outcomes of student employees. The "time-use" or "zero-sum" model predicts that work and school are in direct competition for adolescents' time. According to this view of work, even low levels of employment intensity are expected to negatively impact academic achievement indicators (Greenberger and Steinberg, 1986; Marsh and Kleitman, 2005). On the other hand, the

threshold model of the effect of employment predicts a curvilinear effect of work intensity, whereby the best outcomes are expected for students employed at a lower intensity level rather than non-working students or those employed at a high level of intensity (D'Amico, 1984; Rothstein, 2001). In this study, we account for effect of various work intensity levels of college attendance one year after high school graduation, and find support for the threshold model of work intensity.

The nature/quality of teenage jobs is a dimension of adolescent work experience that rarely appears in models of postsecondary attainment, and our analysis will show that this may be a costly omission. Although it is commonly observed that high school students are largely relegated to the lower rungs of the labor market, receiving little economic or human capital returns on their time investment, there have been few efforts to empirically model the effect of job type on college enrollment. Often, this is a matter of measurement problems or data availability. The shape and structure of the teenage labor market also complicates efforts to construct a classification of student jobs. For this analysis, we employ a three-category classification of student jobs and show that differences in both job type and work intensity have both an exogenous and an endogenous effect on postsecondary enrollment.

Utilizing data from the 2000-2004 cohorts of the University of Washington Beyond High School research project, we examine determinants of 2-year and 4-year college attendance one year after high school graduation. Data was collected at two time points: during the spring semester of the respondent's senior year, and in the spring of the following academic year. The senior year survey provides data on demographic characteristics (gender, race/ethnicity, and nativity status) as well as those indicative of socioeconomic status (parental education and home ownership status), academic achievement (high school grade point average) and employment patterns (work status and intensity, and job type).

Because of ethnic/racial residential patterns as well as those related with immigration, the Beyond High School dataset is particularly apt for studying more precisely the racial/ethnic patterns of in-high school, as well as postsecondary outcomes. This allows us to better understand differential effect of work on college enrollment between groups delineated by nationality rather than by general ethnicity categories. In addition to a greater level of specificity in describing ethnic/racial patterns, this dataset provides detailed descriptions of the work experience of the respondents, facilitating a more systematic job-type classification. Using the 2000 Census classification of occupations, we devised a three-category index of jobs held by students consisting of white/pink collar jobs, blue collar employment and typical teen employment. These categories reflect differences in tasks, working conditions and, to a lesser extent, pay of the incumbents in these job categories.

Figure 1 about here

The conceptual model underlying our empirical analysis takes into account disparities between racial/ethnic, gender and nativity groups in the propensity to attend

college. In addition to the expected independent effect of these background characteristics on college enrollment, we anticipate that their effects will be somewhat mediated through both academic achievement and work experience of students. This expectation is based on previous research findings indicating that ethnic/racial minorities as well as those from disadvantaged socioeconomic backgrounds tend to experience lower employment rates, and higher work intensity levels and lower job quality among the employed (Csikszentmihalyi and Schneider, 2000). There is little dispute about the role of grades and other academic indicators on college enrollment, however, the extent to which work influences academic achievement remains unclear. We allow the relationship between grades and work to be dynamic. Finally, we conceive the effect of work on college attendance to be both mediating (between the background characteristics and college attendance and between grades and college attendance) and direct. Later iterations of this paper will present empirical results based on this conceptual model.

Table 1 about here

This descriptive table illuminates some of the disparities in college attendance patterns we aim to explain in subsequent drafts of this paper. Race/ethnic and nationality-group differences appear rather significant. For instance, 59% East Asian students report attending a four-year school one year after graduation from high school, compared to the sample-wide average of 41%. On the other hand, only 24% of Cambodian students reported attending a four year university. The discrepant rates of non-attendance also merit attention: for instance, what may account for the difference between Vietnamese (8%) and Cambodian (37%) students who have similar immigration trajectories and lengths of stay in the United States? The extent to which these discrepancies are a function of different socioeconomic, academic and employment patterns will be determined using multivariate multinomial logistic regression models.

Differences by gender and nativity with respect to college attendance appear smaller than those between racial/ethnic groups. It is notable that a small 'second generation advantage' appears in form of slightly higher four-year school attendance rates, and slightly lower non-attendance rates.

Previous studies have found that parental education (more so than income) accounts for a large amount of variance in postsecondary educational outcomes. The intergenerational transfer of disadvantage operates partly through the relationship between parental education and college enrollment. Our results are consistent with previous findings indicating that students whose parents do not have a college education are less likely to attend an academic institution after high school, and are significantly underrepresented among those attending a four-year school compared to students from more advantaged backgrounds.

Grades are the singular strongest predictor of postsecondary enrollment (Marsh and Kleitman, 2005). This table illustrates the strong relationship between grades and enrollment patterns. In our fully-elaborated model, we will ascertain the extent to which grade disparities may contribute to the observed differences in enrollment by

race/ethnicity and gender. We expect that grades may account for some of the discrepant college enrollment rates observed.

We account for three important dimensions of employment in this paper: work status, intensity, and job type. These frequency distributions provide preliminary support for the threshold hypothesis of the effect of work intensity on college enrollment. Compared to non-workers, those employed at the lowest level of intensity (12 hours/week or fewer) are overrepresented among four-year college attendees (43% and 61% respectively). Those working 20 hours a week or fewer do not appear to be overrepresented among the non-enrolled, however, exceeding the 20 hour/week threshold appears to contribute to non-enrollment after high school. In our fully-elaborated multinomial model, we will demonstrate that the positive effects of low intensity employment on the odds of college attendance persists after accounting for students' background and achievement characteristics.

The distribution of job type categories into enrollment categories appears non-random. In particular, it is evident that those in the "white/pink collar" category (in other words, the "good" jobs) are disproportionately among those attending a four-year institution (57%). On the other hand, those in the "blue collar/manual" category are slightly overrepresented among the non-enrolled and underrepresented among the four-year school attendees. Those in "typical teenage jobs" (consisting mostly of food and other service occupations) are slightly overrepresented among those attending two-year schools. Although we expect that some differences in enrollment patterns found between incumbents of different job types may be due to differences in student characteristics or the overlap between intensity and job type categories, the inclusion of job type in the analysis is expected to contribute to the explanatory strength of our final model.

In this paper, we aim to contribute to the body of student employment and adolescent transition literature by unpacking the direct and mediating impact of work on college enrollment. Our preliminary findings indicate that students with different types of involvement into the labor market may have substantially different chances of postsecondary enrollment. In particular, we find that students engaged in low-intensity employment and those in white/pink collar jobs may positively contribute to students' propensity to enroll in college. Subsequent drafts of this paper will include multivariate models we hope will shed light on the connection between students' social origins, employment experiences and postsecondary outcomes.

Figure 1: Conceptual Model of the Role of Work as a Determinant of College Attendance

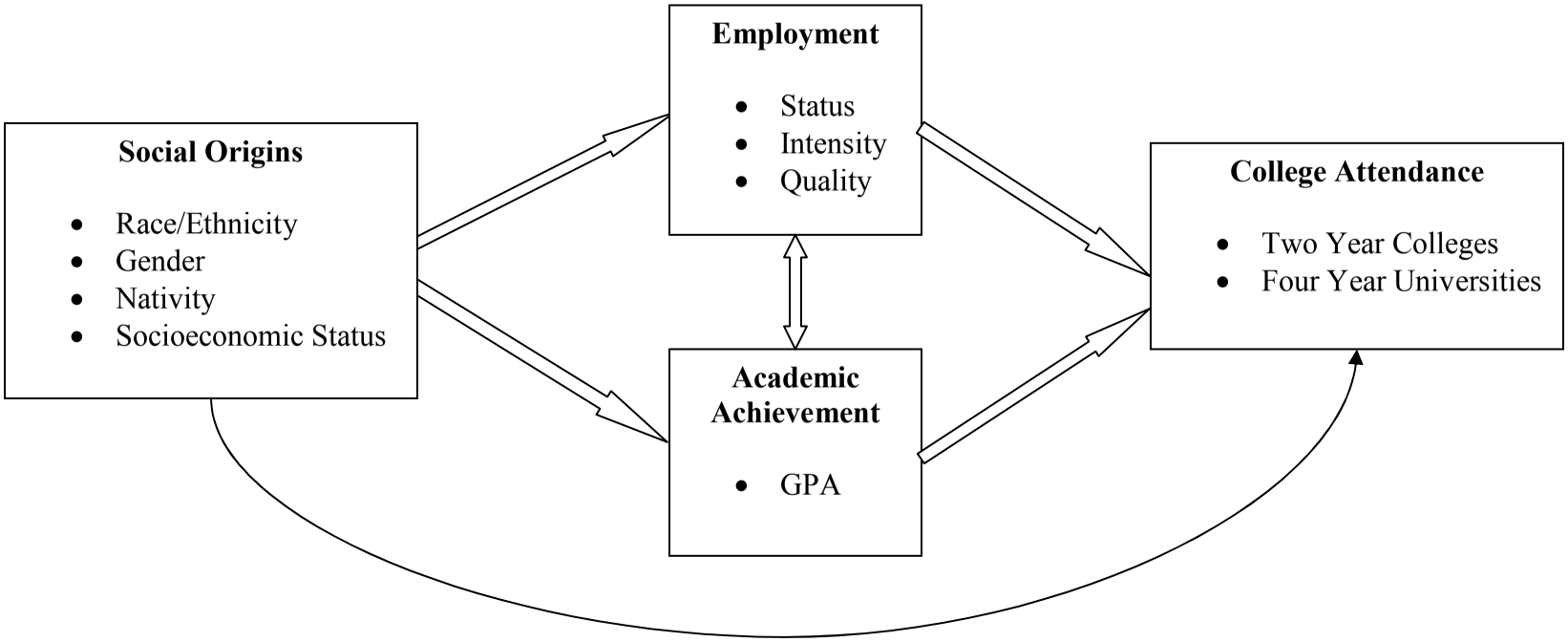

Table 1: Distribution of Independent Variables into College Attendance Categories for Western Washington Students, 2000-2004

| | % Not Attending | % in 2 year school | % in 4 year school | Total | Total N | % in Category |
|---|---|---|---|---|---|---|
| **Origins** | | | | | | |
| GENDER | | | | | | |
| Female | 25% | 32% | 43% | 100% | 3449 | 56% |
| Male | 30% | 31% | 38% | 100% | 2685 | 44% |
| | | | | | | **100%** |
| RACE/ETHNICITY | | | | | | |
| Hispanic | 38% | 33% | 29% | 100% | 510 | 8% |
| African American | 33% | 32% | 36% | 100% | 776 | 13% |
| East Asian | 16% | 25% | 59% | 100% | 449 | 7% |
| Cambodian | 37% | 39% | 24% | 100% | 153 | 2% |
| Vietnamese | 8% | 52% | 39% | 100% | 193 | 3% |
| Filipino | 28% | 39% | 34% | 100% | 254 | 4% |
| Am Indian/Pac Islander | 49% | 24% | 27% | 100% | 266 | 4% |
| White (Non Hispanic) | 26% | 31% | 43% | 100% | 3533 | 58% |
| | | | | | | **100%** |
| NATIVITY | | | | | | |
| 1st Generation | 27% | 38% | 34% | 100% | 817 | 13% |
| 2nd Generation | 25% | 30% | 46% | 100% | 885 | 15% |
| 3rd + Generation | 27% | 41% | 31% | 100% | 4356 | 72% |
| | | | | | | **100%** |
| **Socioeconomic Status** | | | | | | |
| HIGHEST EDUCATION OF PARENT | | | | | | |
| Less than HS diploma | 45% | 36% | 19% | 100% | 402 | 7% |
| HS diploma | 43% | 32% | 25% | 100% | 934 | 15% |
| Some college | 32% | 35% | 33% | 100% | 2259 | 37% |
| BA/BS | 18% | 30% | 53% | 100% | 1231 | 20% |
| Advanced Degree | 12% | 25% | 63% | 100% | 1208 | 20% |
| Not Reported | -- | -- | -- | -- | -- | 2% |
| | | | | | | **100%** |
| HOME OWNERSHIP | | | | | | |
| Rents Home | 39% | 34% | 27% | 100% | 1677 | 27% |
| Owns Home | 23% | 31% | 47% | 100% | 4310 | 70% |
| Not Reported | -- | -- | -- | -- | -- | 2% |
| | | | | | | **100%** |
| **Academic Achievement** | | | | | | |
| GRADE POINT AVERAGE | | | | | | |
| LE 2.5 | 52% | 38% | 11% | 100% | 1646 | 27% |
| GT 2.5 and LE 3.0 | 27% | 40% | 33% | 100% | 1040 | 17% |
| GT 3.0 and LE 3.5 | 22% | 31% | 47% | 100% | 1848 | 30% |
| GT 3.5 | 9% | 20% | 70% | 100% | 1519 | 25% |
| Not Reported | -- | -- | -- | -- | -- | 1% |
| | | | | | | **100%** |
| **Employment Characteristics** | | | | | | |
| WORK INTENSITY | | | | | | |
| LE* 12 hrs/wk | 14% | 25% | 61% | 100% | 746 | 12% |
| GT** 12 and LE 17 | 25% | 34% | 44% | 100% | 532 | 9% |
| GT 17 and LE 20 | 24% | 41% | 35% | 100% | 777 | 13% |
| GT 20 and LE 26 | 33% | 36% | 31% | 100% | 476 | 8% |
| GT 26 hrs/wk | 44% | 38% | 18% | 100% | 600 | 10% |
| Not Working | 29% | 28% | 43% | 100% | 2942 | 48% |
| Not Reported | -- | -- | -- | -- | -- | 1% |
| | | | | | | **100%** |
| TYPE OF JOB | | | | | | |
| White/Pink Collar | 16% | 27% | 57% | 100% | 498 | 8% |
| Blue Collar/Manual | 32% | 35% | 34% | 100% | 489 | 8% |
| Typical Teen Jobs | 27% | 37% | 37% | 100% | 2023 | 33% |
| Not Working | 29% | 28% | 43% | 100% | 2942 | 48% |
| Not Reported | -- | -- | -- | -- | -- | 3% |
| | | | | | | **100%** |
| **Total** | **28%** | **32%** | **41%** | **100%** | **6134** | |

* LE - Less than or Equal to; ** GT - Greater than

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