



HIGH SCHOOL COURSEWORK AND LABOR FORCE ATTACHMENT AT MIDLIFE

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Employment experiences at midlife set the stage for the quality of transitions into old age and retirement; middle-aged individuals without a strong attachment to the workforce face a future of economic vulnerability. It is especially vital for less educated workers to maintain a strong attachment to the labor force because they are likely to rely on Social Security OASI benefits for the bulk or entirety of their retirement income, but they also face unique barriers to work as they age in a changing economy. Considering that high school is a key site of pre-labor market skill development for workers without bachelor's degrees, it is important to understand how schools might prepare students for long-term workforce attachment.

High School Career and Technical Education and Long-term Labor Force Attachment in the US

This study builds on classic and renewed debates surrounding the school-to-work transition and how schools can best prepare students for long-term labor force attachment. Extant research finds that career and technical education (CTE) in high school leads to better labor market outcomes for US workers in early adulthood because it provides students with occupational skills that employers desire. The long-term effects of CTE are not as clear, and scholars have theorized that CTE may be less beneficial or even harmful for students in the long run because occupation-specific skills are less transportable than the general skills gained through academic coursework.

This study is the first to examine the relationship between CTE and long-term labor force attachment among US workers using longitudinal data. Specifically, I examine employment status at midlife (age 50) and plans for future labor force participation as two dimensions of long-term labor force attachment. I use high school transcript data to ensure accurate and meaningful measurement of CTE in the US educational context of comprehensive public schools, where students take a mix of academic and vocational coursework. This research can enrich our knowledge of how pre-labor market skills and training might be placing individuals on trajectories of work and wellbeing as they age. Understanding the long-term effects of high school CTE coursework can shed light on how changing curricular patterns over time might shape Social Security program participation, funding, and benefits for vulnerable workers in a changing economy.

High school CTE coursework does not have detrimental long-term effects on labor force attachment in the US

This study finds that CTE coursework in high school is not harmful for long-term labor force attachment among US individuals without bachelor's degrees. Though both women and men seem to benefit from taking more CTE coursework, the patterns differed by gender. The relationship between CTE intensity and employment at midlife is relatively linear for women, with greater concentration in CTE corresponding to higher probabilities of employment. This is largely because women who took more CTE coursework are less



likely to be out of the labor force at midlife. For men, it is mainly participation in CTE rather than intensity of concentration that is associated with employment at midlife. Men without bachelor's degrees who did not participate in CTE in high school are more likely to be unemployed and to be out of the labor force at midlife.

Individuals who took a mix of CTE and college-preparatory academic coursework in high school have the highest rates of employment at midlife

Consistent with research on short-term labor market effects of CTE in the US, my results suggest a complementarity between CTE and academic coursework for long-term labor force attachment. Individuals without college degrees who invested in both CTE and college-preparatory math coursework in high school have the highest probabilities of employment at midlife. Those who invested in neither CTE nor academic coursework have the lowest probabilities of employment, and individuals who invested in only one area of coursework fall somewhere in the middle. Though investment in neither area is associated with greater probabilities of being out of the labor force for both women and men, the benefit of investment in both areas differed slightly by gender. For women, investment in both areas corresponds to especially low chances of being out of the labor force; for men, it corresponds to especially low chances of unemployment.

Implications

- As the first study to investigate the long-term effects of CTE on employment in the US using longitudinal data, the findings suggest that CTE coursework does not have detrimental long-term effects on employment. In fact, CTE participation may support labor force attachment later in life, especially when paired with college-preparatory academic coursework.
- The findings also suggest that curricular intensification in the “college-for-all” era will not harm students’ long-term labor force attachment, even if they do not end up attaining bachelor’s degrees. However, a combination of academic and vocational education may provide the greatest long-term benefits, which aligns with modern CTE’s focus on preparing students for highly skilled occupations and incorporating more academically rigorous curricular.
- This study’s findings imply that curricular trends over the past few decades could lead to stronger labor force attachment at midlife and longer workforce participation among more recent cohorts of high school students if patterns from this study hold over time. Longer and stronger workforce attachment means more funds paid into Social Security, and fewer workers exiting the labor force due to disability or early retirement means fewer claims outside of full OASI benefits. This is not only vital for the continuation of Social Security programs, but also for workers’ long-term financial security in the face of increased life expectancy and importance of personal retirement savings.

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