

Study gives more accurate picture of value of college education

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A new study that is the first to use Social Security Administration's personal income tax data tracking the same individuals over 20 years to measure individual lifetime earnings has confirmed significant long-term economic benefits of college education.

ChangHwan Kim, a University of Kansas researcher, said the research team was also able to account for shortcomings in previous studies by including factors such as gender, race, ethnicity, place of birth and high school performance that would influence a person's [lifetime earnings](#) and the probability of college completion.

The study estimates that the lifetime earnings gap between high school and [college graduates](#), including those with a graduate degree, is around \$1.13 million for men and \$792,000 for women. These results are similar to past findings.

However, when important socio-demographic variables that influence both earnings and the probability of college completion are accounted for, the study shows that a man who earned a bachelor's degree would earn \$840,000 more over 50 years than a man with a [high school diploma](#). For a woman on average the gap is \$587,000 between earning a bachelor's degree and a high school diploma.

Further, the study applies a 4 percent discount rate over time to account for psychological depreciation of dollar value for future earnings. When taking this into account the net value of a college education at age 20 is around \$314,000 for men and around \$232,000 for women. From this view, the net present lifetime value of college education at age 20 for those who have similar likelihood of obtaining a bachelor's degree is still six times greater than the total cost of college education for men and 4.5 times greater for women.

"This corroborates a college education still yields a substantially more financial reward than it costs," said Kim, associate professor of sociology. "Our results show higher growth rates in median earnings over the lifetime of college graduates relative to high school graduates, which suggests greater intra-generational mobility."

Kim said the findings actually show previous studies overestimated lifetime earnings by about one-third, but he said the objective was to give a more accurate picture of the value of post-secondary education.

"The results reconfirm that the lifetime return on a college education is large," Kim said. "However, the net lifetime value of a college education

is smaller than what previous studies claim without controlling for these certain factors."

Kim conducted the study—funded by grants from the National Institutes of Health and The Spencer Foundation—with Christopher Tamborini of the U.S. Social Security Administration and Arthur Sakamoto, a professor of sociology at Texas A&M University. The paper is forthcoming in the August edition of *Demography*, the top-ranked journal in demographic studies.

Kim said a major key to the study was to match respondents to the Survey of Income and Program Participation to longitudinal earnings recorded by the Social Security Administration, giving the team the ability to estimate 50-year lifetime earnings.

"Most research about differentials in lifetime earnings by education is based on earnings for only a single or limited number of years," Kim said. "This is informative, but it typically entails unrealistic assumptions."

The study examined educational attainment and other data of four groups of men and women born in each decade from the 1930s to 1960s. Then the team examined the lifetime earnings data from 1982 to 2008 to compare with the birth cohort data.

He said a number of studies have used the Social Security earnings data, but none had applied them to the lifetime earnings of education.

"Our analysis uses long-term earnings for the same individual, which provides a better description of the relationship between education attainment and lifetime earnings than estimating cross-sectional data would," Kim said. "Also, our results show the importance of adjusting for socioeconomic and demographic characteristics to disentangle the

effect of education from other factors. This study assesses the adequacy of the measurement of lifetime earnings using cross-sectional survey data."

He said the persistence of the net effect of [college education](#) on cumulative earnings was noteworthy. The study also found the effects of a graduate degree on earnings persist for people into their 60s – more so than someone who only earned a bachelor's degree. The disadvantages of high school dropouts also appear to be mitigated compared with [high school](#) graduates later in their work careers, a point that likely further illustrates the importance of a college degree.

Kim, who studies inequality, said future research would focus on differences in lifetime earnings by college majors and other factors, like race and demographic groups. He said the broad study has findings that would be important for public policy related to student loans and retirement and aging.

More information: "Education and Lifetime Earnings in the United States." *Demography* [DOI: 10.1007/s13524-015-0407-0](https://doi.org/10.1007/s13524-015-0407-0)

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