

## Advanced degree pay premium

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You will often hear statistics citing how much more pay on average a person who has a bachelor's degree earns versus a person who has completed an associate's degree. However, there is little information between the comparisons of a person who earned a bachelor's degree and a person with a master's degree. In ["The labor market returns to advanced degrees"](#) (National Bureau of Economic Research, Working Paper 26959, April 2020), authors Joseph G. Altonji and Ling Zhong compare earnings of people across 19 advanced degrees. For those considering advancing their schooling, learning the pay differential can help them make a more informed decision.

In their analysis, the authors only include full-time workers ages 24 to 59 and exclude those workers with a PhD and those who obtained a bachelor's degree before turning 23. People who obtained a master's degree after age 49 are also excluded. The authors also exclude another group of individuals from the sampling who went to graduate school right after finishing their bachelor's degree.

The authors estimate returns for specific degrees, while controlling for each college major, and they examine how bachelor's degrees could affect the returns of master's degrees. They also account for the occupation of a person (by looking at work experience) before and after obtaining an advanced degree. For example, a teacher with an education degree who decides to obtain a graduate degree in finance to work as a financial analyst would receive a substantial boost in earnings. In this scenario, the earnings of the person with the advanced degree would be inflated as the person went from one occupation to a different occupation that may pay substantially more. The authors account for this by looking at the bachelor degree held by the individual before graduate school and the work history before and after. In a different scenario, a person with a bachelor's degree in business who later obtains a master's degree in finance and continues working in similar occupations before and after acquiring an advanced degree would not experience a substantial increase in income compared with the income increase of the person in the previous example. The authors define this scenario as the personal fixed effects.

The findings reveal that the highest paying fields were medicine (\$164,302) and law (\$127,540), whereas the lowest paying fields were psychology and social work (\$64,554), and humanities (\$61,474). These figures are in 2013 dollars. Looking at closely related fields and occupations shows that the mean earnings of people with a preadvanced degree are \$69,459 (standard deviation \$26,578) and with a postadvanced degree \$94,047 (standard deviation \$30,626). The authors also calculate the internal rate of return between the 19 advanced degree fields and counterfactual net present value earnings to discover that only 3 returned negative rates (master's in other science- and engineering-related fields, master's in arts, and master's in the humanity fields).

The authors caution that their findings are a starting point for learning more about graduate school returns and about estimates that can vary across colleges (ivy league versus nonivy league, for example). A takeaway is that an advanced degree will increase earnings.