

MANAGEMENT

How Does Alumni Donation Percentile Affect the Level of Graduation Rate?

Student Researcher: **Bin Han, Senior**

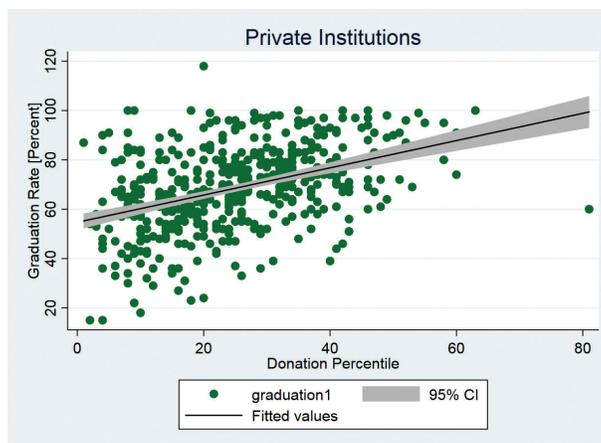
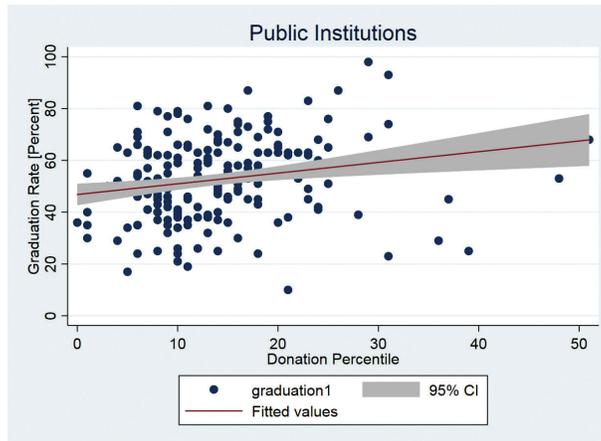
According to the surveys from the Voluntary Support of Education between 2014 and 2016, private institutions have maintained high levels of fundraising, with an increasing trend for some public institutions. Alumni donation accounts for a large portion of fundraising, and it is helpful in improving academic environment. When students have better academic and technical support, without individual abilities taken into consideration, an overall increase in academic performance is foreseen, leading to the result of an overall increase in the graduation rate. With this hypothesis, my research analyzed the relationship between the alumni donation percentile and the graduation rate among 1,300 institutions.

I investigated two types of institutions separately with the same methodology. Seven variables were included in the multiple linear regression model. I checked residuals to meet the normality assumption and conducted Breusch Pagan Test and Special Case White Test to check homoscedasticity, which stands for the assumption of constant variance over the explanatory variable. Additionally, I performed the Ramsey RESET Test to make sure that the model was properly specified, with respect to the linear and quadratic correlation. For private institutions, an additional issue of overcontrolling was resolved by excluding the variable expenditure.

The results showed that alumni donation percentile is statistically significant in determining the level of graduation rates for private institutions, while not for public ones. Consequently, to increase the graduation rate, private institutions could encourage alumni to donate to their alma maters. Ideally, a specific desire for monetary support could be solicited, which could be directly applied to academic services, public expenditures, scholarships, and so on.

There are three conjectures about the discrepancy between public and private institutions. First, public institutions are mainly backed by government funding, while alumni donation has long supported the construction of private institutions. Second, private institutions have a wider range of funding sources, part of which are directly monetary support, allowing them to maintain high levels of academic construction. Third, the data set is antique. Certain changes in some factors, such as education policies and increasing demand for higher education, might have altered the importance of alumni donation for public schools. Further research with an updated data set needs to be conducted to get more accurate relationship, with the aforementioned factors taken into consideration.

Research advisor Kevin Mumford writes: "Bin Han's paper is a careful look at how college alumni donations affect the graduation rate. After finding a large effect for private institutions, Bin digs deeper to separate the effect of the additional expenditure from other factors, like the increase in prestige that comes with donations."



Both scatter plots for public and private institutions display positive correlation between the donation percentile and the graduation rate. The linear relationship seems stronger for private schools. The final result demonstrated that the donation percentile is statistically significant for private institutions, while not for public ones.