### Abstract

Universities have outsourced more of their teaching assignments to adjunct faculty in recent times and many wonder what consequences this will hold for academic labor. Some even fear that the returns of a PhD are a thing of the past. Using longitudinal data from the Survey of Doctoral Recipients from 2003 to 2010 (N=49,190 person waves), we examine the prevalence of adjuncting in higher education by those holding a PhD credential. Over time, we find increasing rates of adjuncting among this population, but the rate is growing far slower than what has been portrayed in many media sources. This study also explores characteristics associated with the risk of serving as an adjunct in higher education. We conclude by discussing faculty adjuncts in the age and aftermath of the great recession.

## **Extended Abstract**

It is well known that colleges and universities face pressure to reign in expenses and stay under budget (Rivard 2013)(Martin 2012). This is particularly the case as institutions have dealt with budget constraints ushered in by the "great recession" of 2007-2009. One of the controversial ways universities have tried to accomplish this has been to hire fewer full-time/tenured faculty and instead outsource teaching to adjuncts, who earn lower salaries, receive fewer benefits and resources, and have fewer contractual guarantees. While these changes have helped to slow the growth of expenses in higher education, popular media and professional outlets in higher education (e.g. Inside Higher Ed and The Chronicle) highlight the potential costs. In many cases, writers question why anyone would pursue a doctorate in the first place, given the poor job prospects presumed to follow (Mason 2012)(The Economist 2010). The common assumption is that adjuncting is not only rising, but also inevitable for contemporary doctoral graduates. However, given the lack of systematic research, these viewpoints have yet to be fully substantiated with a sound empirical foundation: they are merely conjecture.

In this paper, we aim to shed light on the adjuncting prospects of those with doctoral degrees. In particular, we model and test growth rates in adjuncts over the last decade. We also offer a preliminary analysis on correlates of adjuncting, namely how race and gender shape the population of adjuncts in the United States. This examination is conducted using the NSF's Survey of Doctoral Recipients (SDR), one of the most comprehensive data sources on the experiences of doctoral graduates. This dataset surveys doctoral graduates<sup>1</sup> in STEM fields every 2-3 years until they reach the age of 76. The information they have available includes employment, personal, and demographic information. Our particular analysis utilizes the four most recent waves of SDR data: 2003, 2006, 2008 and 2010.

It is important to note that our current analyses rely on publically-available data. The adjunct indicator, for example, has only been made publicly available since 2003, so we cannot yet explore earlier survey waves<sup>2</sup>. Similarly, many of the covariates necessary

<sup>&</sup>lt;sup>1</sup> Survey waves contain information on approximately 30,000 study participants. There are close to 10,000 post-secondary-employed PhDs at each time point.

<sup>&</sup>lt;sup>2</sup> This survey actually goes as far back as 1973.

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for a robust analysis are not made public. These results are preliminary; however, and we have a pending application with the NSF for restricted-use data. We fully anticipate acquiring this microdata in the upcoming months and sharing more rigorous results at PAA in the spring.

## Methods

The first analysis we conducted (Model 1) utilized a mixed-effects linear model (results in Table 1). This framework is similar to an OLS approach, except that it corrects for the over-time dependence in the data. Model 1 predicts the percentage of university employees with doctorates who serve as adjuncts. Our second analysis (Model 2) pools all data and simply predicts (using OLS) the percent of PhDs who ever adjunct between the years 2003 and 2010.

## **Findings**

Although many fear the diminishing academic job prospects for doctoral recipients, we find a low probability of them adjuncting in higher education. Our model predicts that, among those who go on to work in universities, only 7.8% of them will do so as an adjunct. It is also unlikely that this group will ever adjunct over the course of his or her career. We estimate an 11.8% chance of "ever-adjuncting" among those pursuing careers in post-secondary institutions. The likelihood of serving as an adjunct, however, does show a statistically significant increase over time, but this growth rate is very slow. Over the course of nearly one decade, the chance of adjuncting has only increased by 1.8% (p-value <.001).

Additionally, our preliminary analyses show that certain demographic characteristics are associated with greater likelihoods of adjuncting. Compared to women, men are 2.4% less likely to adjunct, after controlling for race. Those of Asian racial/ethnicities are nearly 3% less likely to adjunct, after controlling for gender.

## Conclusion

The analyses presented in this paper indicate that, for those holding doctoral degrees, the risk of adjuncting was probably lower than what many have suspected. The PhD population may have been more likely to adjunct in the recession and post-recession periods, but these longitudinal changes are happening very slowly. It seems unlikely that the adjunct system received a fundamental "shock" resulting from the recession. Changes in the adjunct labor market are evolving far too slowly. Finally, given the disparity between our adjuncting rates and the figures reported in popular media, our research suggests that adjuncting may be more closely linked to those without a PhD credential, such as ABD graduate students and those with only a master's degree.

# Appendix

Table 1: Regression of Adjunct on Time and Covariates

_	Model 1				
variables	Beta	Std. Error	p-value		
(Intercept)	0.078	0.003	< 0.001	**	
Time (reference year 2003)					
year 2006	0.010	0.002	< 0.001	**	
year 2008	0.012	0.002	< 0.001	**	
year 2010	0.018	0.002	< 0.001	**	
Male	-0.024	0.003	< 0.001	**	
Race/ethnicity (reference = White)					
Asian	-0.029	0.004	< 0.001	**	
Other minority	-0.009	0.004	0.026	*	

Table 2: Regression of "Ever-Adjuncting" on Predictors

Model 2

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	Beta	Std. Error	p-value	
(Intercept)	0.118	0.003	<0.001	**
Male	-0.032	0.003	< 0.001	**
Race (reference = White)				
Asian	0.000	0.005	0.965	
Other minority	-0.007	0.004	0.134	_

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