

# **A Comparative Analysis of Student Loan Default Rates Among Pell Grant Students in HBCUs and Non-HBCUs (Revised Proposal)**

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## **1 REVISED INTRODUCTION**

We had previously planned to compare the loan default rate between black students in HBCUs and non-HBCUs and examine how the choice of academic major influences loan repayment for black students. However, we realized that we didn't have enough data to make our findings. The data we plan to use doesn't have the loan default rate disaggregated by race. Moreover, we weren't able to find any other public datasets that have this information. In light of this, we decided to pivot to using Pell Grant students for our study.

We chose Pell Grant students for two reasons: there is data available that disaggregate loan default rate and median earnings by Pell/no Pell Grants and according to a 2019 study by the U.S. Department of Education, the highest proportion of racial group who received Pell Grants for the 2015-2016 academic year are black students (58 percent of full time, four year black undergraduates receiving Pell Grants) (Kelly et al., 2019). This means that by focusing on Pell Grant students, we are focusing on the majority of black students in schools. In addition, we are also considering a broad range of students from various races who are from low-income backgrounds. Since a key reason why we wanted to embark on this research was targeted on black students from low-income families, we decided that pivoting to using Pell Grant students is a good compromise.

In terms of research gaps, there is no research on how the loan default rate for Pell Grant students varies between HBCUs and non-HBCUs; neither is there research on loan debt received by Pell Grant students and how they differ between HBCUs and non-HBCUs. Although there has been some research done that links academic majors to earnings (Meyer et al., 2024), none has gone in-depth into how these earnings differ between HBCUs and non-HBCUs. Hence, our research provides new insights into how the problems Pell Grant recipients face when receiving and repaying loans (especially in HBCUs) and how their choice of academic major might be affected by these problems.

### **1.1 Research Questions**

In this project, we aim to explore the following research questions:

- (RQ1)** How does the loan default rate vary between Pell Grant students in HBCUs and non-HBCUs, or is it relatively the same across all universities?
- (RQ2)** How does the percentage of Pell Grant recipients in HBCUs differ from non-HBCUs, and how does the loan debts received by these students differ across these two university types?
- (RQ3)** What is the relationship between the choice of major of Pell Grant students and the earnings of these students, and is there a difference in this relationship between HBCUs and non-HBCUs?
- (RQ4)** What institutions have the highest loan repayment completion rate for Pell Grant students across HBCUs and non-HBCUs, and is there a relationship between this completion rate and the amount of debt borrowed by Pell Grant students?

## 2 DATA DESCRIPTION

The College Scorecard dataset was collected by the U.S. Department of Education and was last updated on Jan 16, 2025. It contains data regarding student completions, demographics, debt amounts, and other relevant information for all registered colleges and universities in the U.S.

The data originally had 6484 observations and 3305 variables. The data was manually combed to remove any variables that were either outdated, redundant, or not relevant to the purposes of this study. The final dataset had the same number of observations with 236 variables. The NA values have not yet been removed.

An Excel file codebook will be attached.

### 2.1 Description of what we expect to find

Based on our research questions, we have the following hypotheses:

- Pell Grant students in HBCUs have higher loan default rates because the majority of the students receive Pell Grants as opposed to non-HBCUs. Moreover, Pell Grant students in non-HBCUs receive more financial aid as a result of more funding given to these schools. Hence, students take much lower loans on average.
- The choice of major of Pell Grant students plays a role in their ability to complete their loan repayment, and this can influence Pell Grant students to choose majors that they naturally don't like because of the earning potential of such majors.
- In general, Pell Grant students in HBCUs are more disadvantaged than those in non-HBCUs, which calls for more federal funding and support to HBCUs to create a better learning environment for low-income students.

Having preliminarily cleaned the college scorecard dataset, we will first attempt to understand the data at a high level using descriptive statistics to compare loan default rates, major selections and financial metric distributions among Pell Grant students at HBCUs and non-HBCUs. We also plan to apply linear and logistic regression models on the data to assess how differences in funding, loan amounts and major choices correlate with default rates across institution types. We will then test our hypotheses to provide novel insights into financial disparities and academic choices and their correlation with loan default rates.

## 3 GROUP CONTRACT

We expect all members to contribute to the project to the best of their abilities (either through coding, writing, creating the presentation, or leading). We expect a division of responsibilities and the prompt completion of said responsibilities. Communication is the number one priority.

**REFERENCES**

- [1] Kelly, E., Holian, L., Archer, C. (2019, September). Ed. Trends in Pell Grant Receipt and the Characteristics of Pell Grant Recipients: Selected Years, 2003–04 to 2015–16. <https://nces.ed.gov/pubs2019/2019487.pdf>
- [2] Meyer, K., Startz, D., Shi, L., Williamson, V., Marguerite Roza, K. M., & Michael Hansen, K. M. (2024, March 1). *Economic inequalities among college graduates are linked to college major choice*. Brookings. <https://www.brookings.edu/articles/economic-inequalities-among-college-graduates-are-linked-to-college-major-choice/>