Quotas in Brazilian public higher education

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Background

Improving access to higher education is a means to increase social mobility in a society. College-educated workers earn a wage premium and enjoy higher social status relative to high-school educated workers. In Brazil, the public universities are highly selective, offer a high quality education, and are free for all students. Students apply directly to a program, and in popular areas of study such as medicine, there may be 200 applicants for one slot.

The Brazilian public university system operates in a setting characterized by very high levels of income inequality. The Gini coefficient in 2012 was 0.527, and although this measure is falling, it is still one of the highest in the world. Poor parents send their children to poor quality public primary and secondary schools, while middle class and upper class parents send their children to high quality private schools. Previously, each university had a unique admissions test, a vestibular. Currently, the federal government is encouraging universities to base admissions on a standardized national exam, the ENEM. Both types of exams—vestibulars and the ENEM—include a general knowledge part and a subject knowledge part. Because children’s performance on the exams is highly correlated with socioeconomic status, Brazil’s public university admissions policies aided the intergenerational transmission of inequality.

In an effort to make public universities more diverse and accessible to children from poor backgrounds and from underrepresented racial groups, the Brazilian Senate passed a law in 2012 that required federal universities to follow admissions quotas. Half of all spaces in the federal universities are to be reserved for applicants who graduated from public high schools. A quarter of spaces must be allocated to applicants who come from families with low incomes. The racial composition of the students in the universities must reflect the racial composition of the state where the university is located. Universities are supposed to comply with these rules by 2016. Some state universities have also decided to follow the federal guidelines on quotas.

Objectives

This study has 3 main objectives:

1. We will describe the extent to which public universities are achieving the quota requirements.
2. We will examine how the percentage of quota students differs by program, by state, and by year.

3. We will compare the performance of quota students in the university by calculating drop out rates and graduation rates and analyzing differences in these rates across programs and universities.

Some universities started enacting quotas in the mid-2000s. In 2008, 38 out of 224 public schools had some type of quota. However, the quotas were not as extensive as required by the 2012 legislation. For example, a university might have reserved 20 percent of slots for quota students. We will examine whether universities that enacted quotas before 2012 achieve the level of 50 percent quotas before the universities that did not. We will also examine whether more highly ranked public universities enacted quotas more quickly than those who were lower ranked. Another research question is whether quota students tend to be clustered in certain programs. Are quota students distributed equally across programs, or are they overrepresented in less competitive programs?

By following cohorts of students over time, we will be able to investigate whether quota students are more likely to drop out of university programs than non-quota students. The difference in drop out rates might vary by program, by ranking of university, and by gender. We will be able to examine graduation rates by comparing entering cohorts with the number who graduated 4 years later, for example.

Data

We will make use of the last 10 years of the *Censo da Educação Superior* (Higher Education Census). Public and private universities report the data for the Census. In 2013, the Census included 106 Federal universities and 119 State universities. Over 1.7 million students matriculated in these universities, and about 200,000 graduated.

The universities report the number of students that are enrolled in each program and how many graduated, by year when they entered the university, quota status, and race. For example, it is possible to know how many students who entered the Medicine program at the National University of Brasilia in 2010 were enrolled in the program in 2013.

We will use these data to construct matrices that follow a cohort across time within a program at a specific university. For example, we can observe how many quota students entered in 2010 in the year that they entered, and then we can observe how many quota students that entered in 2010 are still there in 2011, 2012, and 2013. The ratio of the difference between 2011 and 2010 over the total number that entered in 2010 is the one-year drop out rate. If a program of study lasts 4 years, we can compare those who entered in 2009 with those who graduated in 2013. In Brazil, students cannot switch from program to program. If they decide to drop out of a program, they must take the entrance exam for another program.

Data for university rankings are available from the Ministry of Education.
Research methods

Once we have constructed data that includes the number of quota and non-quota students by year by program by school, we will first calculate measures of the percentages of quota students that are entering the programs each year to see whether these rates are increasing and how rapidly they are increasing. We will examine whether the type of program and the ranking of the university is related to the percentage of quota students by running OLS regressions.

We will calculate year-by-year drop out rates, as well as drop out rates over the entire duration of the program. We will calculate graduation rates by quota status by year by program by school. The main comparisons will be between quota and non-quota students. When the rates are calculated, we will run OLS regressions with drop out rates and graduation rates as the dependent variables and investigate whether there are differences between quota and non-quota students, and whether these differences vary by program and by university ranking.

We can compare federal universities, which are compelled to comply with the federal law to state universities, which have more flexibility in administering quotas.

We can also examine the racial compositions of the programs and how they changed over time to see whether quotas increased racial diversity in the federal universities.

Expected findings

Previous research about quotas in Brazil has focused on individual universities. We are not aware of any studies that evaluate all of the federal universities. Childs and Stromquist (2014) found that quotas increased diversity in a study of three Brazilian universities. Although quota students had worse scores on the vestibular than non-quota students, disparities in GPA where small and in some subjects, quota students did better than non-quota students. In a study of the National University of Brasilia, Francis and Tannuri-Pianto (2012) found that quotas resulted in higher proportions of black students and of students from lower socioeconomic status. They found no effect of the quotas on racial gaps in GPA, which were small before the quotas. Racial gaps were larger in more selective programs.

We expect to find that federal Brazilian universities are increasing the proportion of quota students to comply with the federal law. We also expect to find that quota students are not equally distributed across programs within universities. As for drop out and graduation, we expect that quota students are more likely to drop out and less likely to graduate than non-quota students. Finally, we expect to find that variables such as the selectivity of the program and the ranking of the program in the university will have significant effects on drop out rates and on graduation rates.
References


Francis, Andrew and Tannuri-Pianto, Maria. 2012. “Using Brazil’s racial continuum to examine the short-term effects of affirmative action in higher education.” *Journal of Human Resources* 47(3): 754-784.