ABSTRACT
The theoretical framework for affirmative action policies converges to a central point: the importance of such policies for students from underrepresented groups due to the negative correlation between their social background and their possible access to higher education. In Brazil, one of the most important policies of this kind is the so-called Programa Universidade para Todos (ProUni – University for All Program). This policy provides fellowships for Low Socioeconomic Status students enrolled in Private Higher Education Institutions (HEI). The purpose of this paper is to verify whether, specifically in Law studies, there is a relation between social disadvantages and academic achievement and if there are returns, in addition to economic profit, for the Private HEI in retaining ProUni students. For such, a linear regression model was created with data from Enade, taking the exam score as the dependent variable, and the independent variables concerning the proportion of ProUni students in the course, the class’s average socioeconomic profile, and the HEI’s faculty profile. The model has confirmed the intuitive relations between the variables of social background and academic performance and identified a positive relationship between the presence of scholarship holders in the courses and the institution’s overall results in the Enade exam. Thus, drawing from the model and the theoretical framework, it has observed that, in Law courses, Private HEI achieve considerably large returns, both in economic capital due to the funding structure of the public policy (ProUni) and in symbolic capital as a result of the positive relation between the presence of ProUni students and the ENADE scores.

KEYWORDS
ProUni e Retornos de Capitais para Instituições Privadas de Ensino Superior: Uma Leitura Para Além dos Benefícios Diretos Com o Financiamento Público

RESUMO
A literatura sobre ações afirmativas converge sobre a importância de políticas reparadoras para grupos sujeitos a desigualdades históricas, em virtude da relação negativa entre os seus antecedentes e as possibilidades de ingresso e permanência no Ensino Superior. No Brasil, uma das principais políticas nessa área é o Programa Universidade para Todos (ProUni), que oferta bolsas em instituições privadas de ensino superior (IPES). O objetivo deste artigo é analisar se, no caso específico dos cursos de Direito, existe a relação entre antecedentes de desvantagem e desempenho acadêmico, bem como se há retornos, além do capital econômico, para as IPES em manter alunos ProUni. Para isso, foi criado um modelo de regressão linear com dados do Enade, usando como variável dependente a nota no exame, e como variáveis independentes a proporção de alunos ProUni no curso, o perfil socioeconômico médio da turma, e o perfil docente. O modelo confirmou as relações intuitivas entre as variáveis de antecedentes e desempenho, e identificou relação positiva entre a presença de bolsistas nos cursos e o resultado no Enade. Assim, a partir do modelo e da bibliografia especializada, observou-se que, nos cursos de direito, as IPES obtêm retornos consideravelmente amplos, tanto de capital econômico, em virtude da estrutura de financiamento da política pública; quanto de capital simbólico, pela relação positiva entre presença de alunos ProUni no curso e a nota no ENADE.

PALAVRAS-CHAVE

ProUni e los Retornos de Capital a Instituciones Privadas de Educación Superior: Una Discusión de los Beneficios más Allá de las Ganancias Directas con Financiamiento Público

RESUMEN
La literatura acerca de las políticas de discriminación positiva converge en algo: la importancia de las políticas para grupos sujetos a las desigualdades históricas, debido a la relación negativa entre sus antecedentes y la condición de empezar un curso en la Educación Superior. En el contexto brasileño, una de las políticas principales en esta área es el Programa Universidad para Todos (ProUni), que ofrece becas en instituciones privadas de educación superior (IPES). El propósito de este artículo es analizar si, en el caso específico de los cursos de Derecho, la relación entre los antecedentes de desventajas y el rendimiento académico se mantiene, así como cuáles serían los beneficios para IPES en el mantenimiento de los estudiantes de ProUni. Para ello, se creó un modelo con análisis de regresión lineal con datos de Enade, utilizando como variable dependiente la calificación de los cursos en el examen. Actuando como variables independientes, observaciones acerca de la proporción de estudiantes de ProUni en el curso, el perfil socioeconómico promedio de la clase y el perfil del profesor de los cursos. El modelo confirmó las relaciones intuitivas entre las variables y también identificó relaciones positivas entre la presencia de estudiantes con becas del ProUni y el desempeño del curso en Enade. Desde el modelo y la bibliografía especializada, se observó la amplitud de los retornos para las IPES en relación al capital económico, debido al financiamiento de las becas; y también acerca del capital simbólico, en función de la relación positiva entre los estudiantes con becas del ProUni y el aumento la nota en el Enade.

PALABRAS CLAVE
Introduction

The theoretical framework for affirmative-action policies in higher education tends to argue that unequal access to this level of education should be modified by increasing enrollment of students from underrepresented groups (ALON, 2015; ALON; MALAMUD, 2014; BROWN; LANGER; STEWART, 2012).

There is a general association between family background and school achievement, as less educated students tend to come from families with less educated parents. Also, students who are from wealthy families tend to take the best positions in higher education. As a result, in a general pattern, parents’ education (DUNCAN, MAGNUSON; VOTRUBA-DRZAL, 2014; GREENMAN et al., 2011; GHEORGHIU et al., 2008; LAREAU; WEININGER, 2008; BODOVSKI, 2010, 2014); social class and family income (DOREN; GRODSKY, 2016; REARDON, 2013); race and ethnicity (WARIKOO et al., 2016; WARIKOO AND CARTER, 2009; FRANCIS; TANNURI-PIANTO, 2012b, 2013); work needs (VARGAS; PAULA, 2012), high school profile etc. are considered factors for school success, since students from privileged backgrounds are more likely to obtain higher scores in standard evaluations and easier admission to higher education.

Similar to many other countries around the world, in Brazil, inequality is strongly correlated with race, poverty, education, and income (HTUN, 2004). Consequently, in the Brazilian case, the most important directive setting forth the calculation and definition of groups entitled to reserved spots was meant to improve access for students with lower SES (socioeconomic status), from unrepresented racial groups, and students from schools with low scores on standard evaluations. That is, the implementation of affirmative-action programs is expected to reduce the differences between 1) the percentage of BPI students in higher education and the percentage of BPI in the general population; 2) the percentage of low income/poor students (per capita household income of 1.5 of the minimum wage) in higher education and their percentage in the general population; 3) the percentage of public middle school students and their percentage in general school enrollment (SCHWARTZMAN; SILVA, 2012; FRANCIS; TANNURI-PIANTO, 2012; TAVOLARO, 2008).

This paper focuses on testing the previous statements derived from the current world theoretical framework through an analysis of a specific Brazilian affirmative-action policy: the Programa Universidade Para Todos (University for All Program), which started in 2005 with the purpose of providing grants for students from low SES backgrounds enrolled in Brazilian private higher education institutions (HEI) (ALMEIDA, 2012, 2017; MELLO NETO, 2015). ProUni was established through Provisional Measure No. 213 of 2004, then converted into Federal Law No. 11,690 of 2005. It ensures reserved spots in the admission exams to higher institutions by funding of low SES student fees.

Like other policies, ProUni’s grant holders come from unrepresented sectors in higher education. In a comparison with their non-grant-holder classmates, they are from low-income families, their parents are less educated, they identify themselves as black, pardo, and
indigenous (BPI), and they went to public schools—which, in Brazil, tend to show lower scores on standard evaluations (INEP, 2019a, 2019d).

However, despite the trends mentioned before, recent studies indicate that ProUni’s grant holders achieve higher scores on standard evaluations (WAINER; MELGIZO, 2017; MELLO NETO, 2015). This means that ProUni students tend to get better scores than their colleagues in the Exame Nacional de Desempenho dos Estudantes [Enade - National Students Performance Exam (BRASIL, 2004a, 2004b; INEP, 2017a)]. Hence, ProUni grant holders contradict the general pattern of a negative correlation between disadvantaged background and their scores on standard evaluations.

Therefore, this paper focuses on the alternative pattern observed in ProUni grant holders, looking at the impact of the policy on the standardized score achieved by Law courses in Enade 2015. According to this viewpoint, our purpose is to show a new perspective on Prouni’s benefits to HEI. The aim is to discuss the development of a policy intended to increase low SES students’ access to higher education, which additionally provides extra benefits to HEI. Our ultimate goal is to assess the impact of the number of Prouni students on course scores. The number of Prouni grant holders in every course will be compared with variables related to faculty profile and student’s socioeconomic status in the same courses.

Nevertheless, there are some limits to this approach. Enade is a standardized test for senior undergraduate students (who must have completed at least 80% of the curriculum) and is a component of the national higher education evaluation system [SINAES (BRAZIL, 2008)] including the Preliminary Concept of Courses (PCC) (BARREYRO; ROTHEN, 2014). The exam takes place every year, although each individual course is evaluated only every third year, which prevents an overall analysis. Because of this, only the results of law courses are analyzed. In view of that, panel data cannot be observed for the same course. Data used here are from 2015 covering the entire country.

Thus, due to data limitation and because this paper is part of an ongoing research on Prouni alumni in Law studies, the authors have chosen a cross-sectional data analysis with Law students taking the ENADE in 2015. As a result, causality cannot be shown between the variables observed and the Enade scores. On the other hand, it may be an indication of relations between aggregate variables on the HEI level.

The Brazilian Higher Education System: Persistent Inequalities and Affirmative Action as an Alternative

From an economic perspective, Brazil is one of the most unequal countries in the world—the 13th worst position in the World Bank Gini index (2017). The Brazilian education system is also historically unequal, where the majority of students go to public high school (87%) but private institutions are attended by a minority of wealth students (Inep, 2019c). Public universities, however, are considered the best ones but are unable to provide
enough enrollment (Inep, 2019b). This situation unleashes a huge number of applications to the public (and free) universities. Consequently, the admission process and the family’s income are a bottleneck for lower SES students in accessing higher education. The Brazilian HES has two major forms of funding: public HEI, with no fees, and private HEI, with fees based on the prestige and quality of the institution (SGUISSARDI, 2015). Along with the admission process, financial incapacity is historically responsible for the high level of inequality in the Brazilian HES (CHAVES; AMARAL, 2015; AMARAL, 2016). In short, students from wealthy families tend to go to better either public or private HEI while lower SES students tend to go to private institutions of poor educational quality or to give up higher education (AKKARI, 2013).

Intending to tackle this situation, the Brazilian federal government devised two affirmative-action policies whose aim was to increase the number of lower SES students (BBI, from public schools, and with a per capita family income of less than one and a half minimum wage) in higher education. On one hand, focusing on public HES, the quota program in federal institutions was created [Federal Law No. 12,711 from August 2012 (BRASIL, 2012)]. On the other hand, focusing on the private sector, the Programa Universidade para Todos (University for All Program; ProUni) [Federal Law No. 11,096, of January 2015 (BRASIL, 2005)] was established. The legal act reserving spots in higher education (known as the quota law) provides free tuition to lower SES students in public HES and ProUni grants scholarships to the same group of students in private institutions. In both cases extra criteria are applicable when selecting students, such as income and race/ethnicity.

To support these programs, the Brazilian federal government used a national selection process for higher education. The so called Exame Nacional de Ensino Medio—Enem— (the national high-school exam) has emerged as a mandatory mechanism to select students going to higher education in publicly funded institutions. The exam selects students for both public HEI spots and for ProUni scholarships in private HEI. Other spots in private HEI are independently defined by the institution itself. Enem score can be utilized, if desired.

**ProUni: Grant Holder’s Profile and Academic Achievement**

ProUni grants scholarships to lower SES students going to Brazilian HEI. The program targets students who have gone to public schools and whose per capita family income is below one and a half minimum wage (for a full scholarship). Partial grants are also

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1 The Federal Law 12.711 (Quota Law), which, after a long process of discussion and vote, created a Quota program and brought ordination to “access to federal universities and federal institutions of middle level technical education”, through spot reservation (quotas) in the examination contests of these institutions. The Quota Program is a complementary tool connected to the “Programa de Apoio a Planos de Reestruturação e Expansão das Universidades Federais” - REUNI (Support Program to Restructuring and Expansion Plans of Federal Universities), which aims to gradually increase the average rate of conclusion in graduate courses of Federal Universities.
offered to students whose per capita household income does not exceed three minimum wages (BRAZIL, 2005).

HEI get tax-free funds (CARVALHO, 2010). The institution is not required to join the program, although most of them have done so (CARVALHO; LOPREATO, 2005; CARVALHO, 2006). To obtain tax-free status, the institution must offer approximately 10 percent of the total vacancies to ProUni (BRAZIL, 2005), that is to say, vacancies with no tuition fees. Since 2005, the program has granted some 1.5 million scholarships, out of which 70 percent are totally free (Sispronui, 2017).

However, even if the amount of scholarships provided is impressive, only a small percentage of students have access to the program. Around 7.5 percent of students are supported with a full ProUni grant in the private sector, as a result of the selection process2 [Enem (Inep, 2019d), while 80.6 percent are classified as eligible candidates. It is a huge number of applicants (SISPROUNI, 2017) and—quite often—over 10 times more than the number of vacancies available.

On the other hand, private higher institutions’ admission processes are traditionally conducted by the institutions themselves, which usually makes it less competitive. To illustrate that, 50.6 percent private higher education courses have had as many as or fewer applicants than the vacancies available. Only 22.2 percent of them had more than two applicants per spot (Inep, 2019b).

This results in a huge difference between groups, where ProUni scholarship holders have better educational achievement despite their lower socioeconomic profile. In other words, the program gives support to the best students with lower SES profile while for their colleagues the only barrier to higher education is the tuition fee. Thus, ProUni students have the highest academic achievement, in the average, although they come—compared to their colleagues—from a group with a larger proportion of BBI, less-educated parents and the lowest family income (MELLO NETO, 2015).

As shown in the introduction, increased access by students from lower SES to HES has been widely discussed in theoretical terms. Almost all researchers in this field believe that social and family background affects academic achievement. Unlike high SES students, their counterparts with lower SES have no sense of belonging in higher education. Their families have been historically unable to reach this level of schooling. Social background, low scholarly achievement, and school drop-out rates are strongly correlated. Especially for elite HEI (ARIES; BERMAN, 2012), the lower SES student will study with colleagues who come from families with higher income and to whom higher education is a “natural” path (NIL;

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2 In order to calculate, the following applicants were removed from the sample: applicants who just want to have a feeling of process (freshmen, sophomores, and juniors who apply to gain experience in the exam), applicants who sign up in order to get higher education level certification; applicants who sign up and miss the exam or who were withdrawn from the exam or had 0 score in the essay-writing test; and applicants with missing values.
Methods

As previously argued, there is a data limitation. It is impossible to analyze all courses, and even create panel data with homogeneous information. Enade takes place every three years for each individual course and senior students sit to it. That is, the great majority of students are not evaluated and, more importantly, Enade collects no information about students in the beginning of higher education. So data are limited to undergrads who are about to graduate and, thus, leave the system.

As a result, we have chosen to conduct a cross-sectional data analysis of law students. The option for this course took into account that this paper is part of an ongoing project, which involves a research focusing on students and alumni from ProUni on private HEI in Brazil. Our theoretical perspective was based on Pierre Bourdieu’s (1986) notion of field, specifically the law field which influenced the decision. It is also important to mention that Law is in the second place among college courses in terms of the number of students in Brazil (Inep, 2019b).

Data from the 2015 Enade was used (2017a), collected on a per student basis on the Law course level. As a general pattern, every HEI has only one law course, all senior law students from Enade’s microdata were taken into account. Next, data were aggregated on the HEI level. Only those in regular status were included in the final databases. That is, students in irregular situation were excluded from the sample (variable TP_PR_GR ≠ 555) as well as those who missed one part of the exam (variable TP_PRESS ≠ 555). Individual information was collected through contextual variables, including: exam score; type of funding in higher education etc. Eventually, all information was merged and calculated as a percentage variable, mean or median for every course in each HEI. This was done by using INEP course code in order to aggregate variables. After that, the sample was merged with variables from CPC, including aggregate variables on HEI faculty’s, infrastructure and pedagogical paths. The CPC is also presented by the INEP course code.

In the end, 1,066 law courses in Brazil were observed. Out of them, 325 were excluded due to the fact they had no ProUni scholarship holders. Additionally, 140 (13 percent) were also excluded because they are from a public HEI, and 185 (17.35 percent) because their law course did not participated in ProUni. Subsequently, information was missing for key variables in 5 courses (0.47 percent) which were also withdrawn and 13 (1.02 percent) were outliers. Summing up, 723 law courses were observed with a total of 80,411 students.
Multiple linear regression was used SPSS software to estimate the inferential models presented in this paper. For variable selection, the stepwise backward method was utilized with a significance level of 0.05.

**Observed Variables**

The following step was to discuss the relation between the percentage of ProUni scholarship holders and the average score of law courses in Enade. Because of it, the mean value for every student in a course was selected as the dependent variable in the model. Independent variables were selected based on a theoretical framework about affirmative-action policies towards higher education. They are correlated to individual and historical patterns of the students in each course, and HEI information, working as a proxy of quality and human capital investments by the institution. It is important to highlight that there was an attempt to control the sample on a per Brazilian region basis and also per category of HEI (university, higher education center, and college). The dummy variables do not have significance in the model.

Frame 1. Variables initially observed in Multiple Linear Regression model.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependence relation</th>
<th>Group</th>
<th>Descriptive</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course average score</td>
<td>Dependent variable</td>
<td>-</td>
<td>The individual score(^4) of each student was calculated as well as the course mean value. The variable was calculated for each course and normalized (Templeton, 2011) ranging from 0 to 100.</td>
<td>Continuous</td>
</tr>
<tr>
<td>Average household per capita income</td>
<td>Independent variable</td>
<td>Individual and historical patterns of students</td>
<td>This variable was calculated in 2 steps: (1) household per capita income for each student by dividing the family income variable by the number of household residents; (2) the average family per capita income for each course. This variable was Log10 transformed to the model</td>
<td>Continuous</td>
</tr>
<tr>
<td>ProUni full fellowship (%)</td>
<td>Independent variable</td>
<td>Individual and historical patterns of the students</td>
<td>The qualitative types of grant (ProUni full scholarship) were converted into a dummy variable with 1 for ProUni full scholarship and 0 for the others. The final variable is the percentage of students with a ProUni full scholarship in each course. This variable was Log10 transformed to the model</td>
<td>Continuous</td>
</tr>
<tr>
<td>Percent of working students</td>
<td>Independent variable</td>
<td>Individual and historical patterns of the students</td>
<td>Dummy variable with 1 for students who need to work 40 hours (or more) in a week and 0 for the others. The final variable is the percentage of working students in each course.</td>
<td>Continuous</td>
</tr>
<tr>
<td>Percent of first-generation college</td>
<td>Independent variable</td>
<td>Individual and historical</td>
<td>Dummy variable representing students, with 1 if any relatives completed higher education and 0 if not. The final variable is the percentage of the</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

\(^3\) In Brazil there are 3 major types of HEI classified hierarchically: University, Higher Education Center, and College.

\(^4\) The individual average score (IAS) is the weighted mean of the scores in the general and the specific parts of the Enade test, ranging from 0 to 100. The specific part of the test evaluates the capacity of the senior student regarding the core skills of a career, whose weight is 0.75. The general part is common to all courses, evaluates general knowledge, and represents 0.25.
students | patterns of the students | relatives completed higher education in the total of the cases of a given course
---|---|---
Percent of public high school students | Independent variable | Individual and historical patterns of the students | Dummy variable with 1 for students who went to a public school most of the final years and 0 for students from other school history. The final variable is the percentage of the first variable in the total cases of a given course. This variable was normalized (Templeton, 2011) to the model. | Continuous
Percent of faculty with no academic degree | Independent variable | Individual and historical patterns of the students | This variable was calculated by subtracting the percentage of faculty with at least a master’s degree in each course to 100. As a percent index. The final variable ranges from 0 to 100. | Continuous
Ratio between the number of students and the number of faculty with a PhD degree | Independent variable | Individual and historical patterns of the students | This variable was calculated by the ratio between the number of students and the number of faculty members with a PhD degree. It was observed that all students who applied and the number of faculty was calculated by the ratio of the total number of faculty and the percentage of them with a PhD degree. This variable was normalized to the model (Templeton, 2011). | Continuous
Source: Inep (2019a), prepared by the authors

However, working students, percentage of first-generation undergraduates and percentage of public high-school students were highly correlated, as shown below.

**Table 1. Correlation Matrix**

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Percent of first-generation undergraduates</th>
<th>Working students</th>
<th>Percent of public high school students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of first-generation undergraduates</td>
<td>1.000</td>
<td>.492 (p &lt; 0.001)</td>
<td>.678 (p &lt; 0.001)</td>
</tr>
<tr>
<td>Working students</td>
<td>.492 (p &lt; 0.001)</td>
<td>1.000</td>
<td>.589 (p &lt; 0.001)</td>
</tr>
<tr>
<td>Percentage of public high-school students</td>
<td>.678 (p &lt; 0.001)</td>
<td>.589 (p &lt; 0.001)</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Determinant = .342.

Source: Inep (2019a), prepared by the authors.

Then, a common factor analysis was conducted to compose a variable computed from a linear combination of those three variables. The Kaiser-Meyer-Olkin test of sampling adequacy (KMO) was 0.682 and the Bartlett test had sig = .000. The anti-image correlation matrix diagonal had values over .500 and the proportion of a variable’s total variance that is accounted by the common factors (communality) also had satisfactory values.

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5 Seeking to control financial expenses, many institutions hire teachers with a specialization—a level below the master's degree. Specialization is traditionally a non-academic type of training. Teachers with specialization usually do not have teacher training nor research experience.
Table 2. Communalities

| Percent of first-generation undergraduates | 1.000 | .727 |
| Working students                        | 1.000 | .648 |
| Percent of public high school students   | 1.000 | .801 |

Extraction Method: Principal Component Analysis

Source: Inep (2019a), prepared by the authors

Table 3. Total Variance Explained

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extracted Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% variance</td>
</tr>
<tr>
<td>1</td>
<td>2.176</td>
<td>72.540</td>
</tr>
<tr>
<td>2</td>
<td>.520</td>
<td>17.319</td>
</tr>
<tr>
<td>3</td>
<td>.304</td>
<td>10.140</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis

Source: Inep (2019a), prepared by the authors

Table 4. Component Matrix

<table>
<thead>
<tr>
<th>Component</th>
<th>Percent of first-generation undergraduates</th>
<th>Working students</th>
<th>Percent of public high school students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.853</td>
<td>.805</td>
<td>.895</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser normalization

Source: Inep (2019a), prepared by the authors

The compound variable Social Background replaced the three other variables in the regression model. In common, the 3 variables work as proxies of belongingness to the lower socioeconomic stratification. That is, decreasing these variables means that the course tends to have students with fancy profile. So, the new variable has a similar capacity, that is, increasing this variable indicates that the course is mostly occupied by lower SES students.

Consequently, the Linear Regression Model was calculated with the variables presented below.

Frame 2. Variables utilized in Multiple Linear Regression model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependence relation</th>
<th>Group</th>
<th>Descriptive</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course average score</td>
<td>Dependent variable</td>
<td>-</td>
<td>The individual score of each student were calculated and the mean of each course was calculated. The variable was calculated for each course, normalized (Templeton, 2011), and is shown in a continuous form.</td>
<td></td>
</tr>
</tbody>
</table>

6 The individual average score (IAS) is the weighted mean of the scores in the general and the specific parts of the Enade test, ranging from 0 to 100. The specific part of the test evaluates the capacity of the senior student related to the core skills of a career, and has a weight of 0.75. The general part is common to all courses and evaluates general knowledge, representing 0.25.
Median household per capita income | Independent variable | Individual and historical patterns of the students | This variable was calculated in 2 steps: (1) calculus of the household per capita income for each student by the division of the family income variable by the number of household residents; (2) calculus of the median of the family per capita income for each course. This variable was \( \log_{10} \) transformed to the model | Continuous

ProUni full fellowship (%) | Independent variable | Individual and historical patterns of the students | The qualitative types of grant (ProUni full fellowship) were converted into a dummy variable with 1 to a ProUni full fellowship and 0 to the others. The final variable is the percentage of students with a ProUni full fellowship in each course. This variable was \( \log_{10} \) transformed to the model | Continuous

Social Background | Variável Independente | Variável de histórico socioeconômico de estudantes | Factorial variable | Continuous

Percent of faculty with no academic degree | Independent variable | Individual and historical patterns of the students | This variable was calculated by a subtraction from the percent of faculty with at least a master’s degree in each course to 100. As a percent index. The final variable is shown in a range from 0 to 100 | Continuous

Ratio between the number of students and the number of faculty with a PhD degree. | Independent variable | Individual and historical patterns of the students | This variable was calculated by the ratio between the number of students and the number of faculty members with a PhD degree. It was observed that all students who applied and the number of faculty was calculated by the ratio of the total number of faculty and the percentage of them with a PhD degree. This variable was normalized to the model (Templeton, 2011). | Continuous

Source: Inep (2019a), prepared by the authors

A multiple linear regression was created to predict the ‘Course average score’ variable (course average score) based on the variables mentioned above.

### Results

A significant regression equation was found (\( F(5.717) = 70.880, p < .000 \)), with an \( R^2 \) of .331.

<table>
<thead>
<tr>
<th>Course average score</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Analysis n</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50.0640</td>
<td>16.64586</td>
<td>723</td>
</tr>
</tbody>
</table>

7 Seeking to control financial expenses, many institutions hire teachers with a specialization—a level below the master's degree. Specialization is traditionally a non-academic type of training. Teachers with specialization usually do not have teacher training nor research experience.
The standard coefficients in the model indicate that the household income is the major impact (.360 per standard deviation), with the compound variable in second place (-.209 per standard deviation), the ratio between the number of students and the number of faculty members with a PhD degree in third place (-.206 per standard deviation), the full grant holder in fourth (.198 per standard deviation), and the percent of faculty members with no academic degree in fifth (-.151 per standard deviation).

It is significant to note that all signs on the standard coefficient comply with the theoretical framework backing up this paper. That is, the median household per capita income of the students and the percentage of Prouni’s full grant holders positively affect the course’s score. It confirms the assumption that the positive impact of family background on the students’ performance. Moreover, as expected as well, the social background variable has a negative coefficient which confirms the assumption that courses with lower scores tend to receive more students from Low SES profiles. It is also remarkable that two proxies’ variables related to HEI profile (Ratio between the number of students and the number of faculty members with a Ph.D. degree and Percent of faculty members with no academic degree) have a negative coefficient.
Discussion

ProUni has become an important tool to access lower SES students in Brazil and open their way to higher education. The high number of grant holders and the longevity of the program are some of the signs of its success. Besides, although it is necessary to further discuss the relation between the number of candidates and the number of scholarships available, data above show that ProUni works as a selection process that reaches out qualified students with excellent school achievement.

On the other hand, data also points to an unexplored factor of the program: the possible gain obtained by higher education institutions as they join ProUni. Since its inception, ProUni has presented itself as a public policy focusing on the financial benefits for the private education system. As stated, among other reasons, the program emerged as a public financing tool for a decaying education system where idle vacancies were constant. (CARVALHO, 2014).

The program was created under the guise of being an accounting trick which allowed the federal government to show a significant expansion of enrolment without no need for a proportional level of expenses (Chaves and Amaral, 2016). By offering tax exemptions in exchange for vacancies, ProUni emerges as large-scale funding for students with low added cost. The average cost of a ProUni student is considerably lower than their counterpart in the federal universities\(^8\) (Costa and Ferreira, 2017). That is, it is essentially a policy that invests little but obtains stunning results. In summary, ProUni uses a prior tax exemption system and, by expanding the number of benefitted institutions, it is capable of expanding the country’s system of higher education free of tuition fees.

The expanded access to private higher education has largely served the interests of private institutions whose number of students had reached a ceiling hard to exceed. As argued before, low-income students were not able to afford higher education, resulting in idle capacity in the private system. In exchange for tax exemption for HEIs, by providing low SES young people with this level of schooling, ProUni ensured the economic survival of the private system as well as a possible market expansion (CARVALHO, 2014).

As a result, the relationship between public investment and public policies and the validation of educational programs, the Brazilian government created the National System for the Evaluation of Higher Education (SINAES) through Act No. 10,861 (BRAZIL, 2004a). Its main objective was to make sure that HEIs and undergraduate courses were duly evaluated, as well as to assess the students’ academic performance through the Enade exam. The evaluation system proved to be crucial in creating and maintaining ProUni, as a quality control tool to check eligibility (or lack thereof) of HEIs to join and stay in the program (BRASIL, 2005). Therefore, this evaluation policy is connected with ProUni and legitimizes its funding under

\(^8\) It should be highlighted that public HEIs in Brazil have higher operating costs; however, they do not necessarily reflect direct expenses with students or something equivalent to a monthly tuition fee. Unlike private HEIs, public institutions provide services such as hospitals as well as research and extension activities.
the guise of quality assurance. In the lack thereof, it would not be possible to question the quality of private HEIs, and, consequently, question investments they can get (BARREYRO et al., 2014).

Thus, a system conceived to legitimize public funding for private higher education has become an important tool to add value to the relationship between paying students and HEI. That is, the evaluation system has allowed HEIs to quantify its quality, giving rise to a sensible argument that students are customers of these institutions. Therefore, based on government certified quality, private institutions are able to justify their quality and the value of the monthly funds they are paid.

On the other hand, the consolidation of this evaluation system, together with the virtual expansion of the private education market, inevitably led to a valuation policy for institutions through external evaluation (BARREYRO et al., 2014). That is, the scores and ranking of courses and institutions turned into marketing tools that eventually validated the costs of monthly financial resources and also justified greater or lower student demand. Being the “best course of somewhere” has become a strong argument for institutions.

Also, in addition to the aforementioned direct gain in economic capital (through tax exemptions), institutions end up obtaining long-term funding guarantees. Grant holders are students whose expenses are predictable; that is, they are admitted to a private college knowing for sure that their tuition will be paid up till they graduate, which, given the economic context in Brazil, is a steady financial “wind” for the institutions.

In addition, since the percentage standard is calculated according to the number of paying students (BRASIL, 2005), even if an economic crisis directly affects the supply of paid enrolment, as long as the proportion is maintained, the institution is exempt from taxes. Also, ProUni grant holders have lower dropout rates (FELICETTI; FOSSATI, 2014b), which implies even greater assurance of proportionality in the number of scholarships holders and the minimum amount of paying students required.

However, our point is to realize that, in addition to funding, the program provides the institutions with other benefits. In other words, even though it subsidizes the private system, the increase in the number of scholarships ensures gains the institutions can get in more than one step.

Since there is scarce investigation available in higher education on this matter, it is necessary to consider the similarities and differences between our findings and the situation in basic education. First, as Bruel and Bartholo (2012) point out, students’ social background in their basic schooling has remarkable impacts on academic results and developments as they boost student selection (sometimes explicitly declared). In higher education, it is reasonable to imply that, in addition to financial gain, selecting ProUni students is beneficial to HEIs - and may even offset the negative impacts of the disadvantaged social background of those students.
Moreover, the expected relationships between the Enade scores and the qualification of the faculty are clearly seen as well as the students' admission to more qualified colleges. In both cases, increasing the number of qualified faculty leads in higher course scores. In other words, the high number of faculty members without a scholar degree impacts negatively the course rank. In a qualitative perspective, it shows the course’s teaching staff is inadequate and/or ineffective; also, the higher amount of students with a fewer PhD professors may be an indication of overwork to some professionals who – hypothetically – need to supervise more students than it would advisable. Considering, therefore, the teaching component in the process, in light of the findings of this study and the available literature on the subject, again, in basic education, it can be deduced that both the proper training of the faculty and lowering their teaching burden imply in good results, as for example, pointed out by Vitelli, Fritsch and Corsetti (2018).

Consequently, the ProUni federal program, which since its inception has been working as a tool that provides private HEIs with financial health, has proved to effective in improving good performance. That is, based on ProUni´s fellow, it is compensating the low availability of qualified teachers in private HEI from Brazil.

**Conclusion**

ProUni has shown to be an important gateway to include lower SES students in Brazil’s higher education scenario. Hardly to be found in any other country, the program provides students with disadvantaged background with financial support, but also specifically those students with high academic achievement. Unexpectedly, the poorest students get the top scores in a system of private higher education where wealthy undergraduates prevail. Thus, the educational (and cultural) gain obtained by the scholarship holders is an important aspect that should be explored by researchers around the world.

The results above also show a different perspective of ProUni. Although grant holders are the best evaluated students, the HEI gains – both financial and in their social image – have not yet been properly assessed. At least in the case presented here, the increased number of program fellows improves the course’s ranking in higher education standardized test. Thus, the program has become not only a tool to include lower SES students in higher education, but also a way to provide significant profit for the institutions.

Therefore, further research should be conducted with the use of more robust data in order to investigate the initial issues raised in this paper. Looking into the assumptions made here can yield deeper understanding of public policy behavior and, perhaps most importantly, the developments in the way private educational institutions manage public investment. It can certainly be seen as a research field that will yield fruitful findings.
References


