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Talented Low-Income College Graduates**

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(Incorrect) Perceived returns and strategic behavior among talented low-income college graduates*

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Abstract

Job applicants use resumes to send signals to potential employers. Applicants are free to select the items that go in their resumes and are expected to include signals they perceive will help them achieve their goals and avoid those that they anticipate could hurt them. We show that 92% of beneficiaries of a highly selective scholarship for poor and talented students avoid listing this award when applying for jobs. This is consistent with beneficiaries perceiving a negative labor market return from sending that signal. A correspondence study shows instead that listing the scholarship increases call back rates by 20%.

Keywords: perceived returns, strategic behavior, job seeking.

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Job applicants use resumes as a way to send signals to potential employers. Signals could represent productivity (via academic and labor achievement), readiness for the job and potential match quality. Applicants are free to select the items that go in their resumes and are expected to include all the signals that they perceive will help them achieve their goals and, if possible, avoid those that they anticipate might hurt them. In this paper we study such choice for a sample of college graduates awarded a highly competitive scholarship to attend college.

As explained below, *Beca 18*, is a generous scholarship financing all college-related expenses, created by the government of Peru. Beneficiaries need to show academic excellence to gain and keep the scholarship. They also must come from poor or extremely poor households. When applying to jobs, *Beca 18* beneficiaries will consider the costs and benefits of listing this scholarship in their resumes (just like for most other items). If they anticipate the academic excellence and competitiveness of the scholarship to be the dominant signal, we should see beneficiaries to include *Beca 18* their resumes. On the other hand, if they expect a negative reaction to the poverty signal coming from the award to dominate, they will avoid listing the scholarship. Using a sample of resumes we find evidence consistent with the latter view. We show that only eight percent of beneficiaries list *Beca 18* in their resumes.

In this regard, our paper is related with recent work showing the strategic behavior of disadvantaged groups. For example, Bursztyn et al. (2017) show that MBA unmarried female students choose to avoid career-enhancing actions when they expect their classmates to see their preferences. Lepage et al.

(2022) use and validate a model showing that anticipated discrimination in the labor market lead to differential strategic behavior by gender on whether to mask their grades or not in STEM-related fields. Outside the labor market, García and Darity (2022) find that small business owners concealed their race in Paycheck Protection Program applications. Black-owned businesses that concealed their race obtained 52% more in funding than Black-owned businesses that self-reported their race.

We then discuss the findings of a companion paper where we conducted a correspondence audit study (Agüero et al., 2022). After sending fictitious resumes randomizing the inclusion of *Beca 18*, we uncover higher call backs rates (by 20%) for resumes that listed the scholarship. This suggests that the perceived negative reaction to the signal of *Beca 18* is not supported in the labor market. This result allows for a low-cost policy intervention: nudge actual *Beca 18* beneficiaries to include the scholarship in their resumes. We discuss such a policy in section 4.

1 A brief description of *Beca 18*

To address the unequal access to higher education experienced by the youth from low socioeconomic backgrounds, the Peruvian government established *Beca 18* in 2011. To be eligible, aspiring college students need to be Peruvian citizens, younger than 23, enrolled in (or graduated from) a public high school, come from households identified as poor or extremely poor (by SISFOH)¹ and

¹SISFOH is the Sistema de Focalización de Hogares, the central government’s targeting tool used to distribute anti-poverty programs.

rank in the top third of the GPA distribution in their junior and senior years in their local high school.

Beca 18 applicants then take a national academic test and only a fraction (around 10%) advance to the next round. Students then apply to college but *Beca 18* is not involved in this process. After their admission they become beneficiaries of the scholarship. Agüero et al. (2022) report a success rate to win the scholarship short of 6% among eligible registered applicants.

The scholarship covers all college-related costs. In addition to tuition, it pays for room and board, fees, transportation (to/from college and locally), textbooks, health insurance, laptop and tutoring (if needed). The scholarship lasts for the entire college degree as long as beneficiaries maintain good academic progress. In the first ten years of operation, *Beca 18* has supported more than 65,000 students attending 3-year and 5-year colleges.²

Agüero et al. (2022) discuss more details of this scholarship. For instance, they show that no other program (private or public) has the coverage and selectivity of *Beca 18*. The authors also present information arguing that the scholarship is well known in Peru. In the most recent presidential debate one of the candidates advocated the expansion of the scholarship to include children who lost a parent due to the COVID-19 pandemic.

²Peru's education system consists of 6 years of primary education and 5 years of secondary. After that students could go to 3-year or 5-year colleges. The former are referred to as *institutos* and the latter as *universidades*.

2 Signals in resumes

We gained access to resumes from actual beneficiaries thanks to our collaboration with Pronabec, the branch of the central government in charge of administering all government scholarships, including *Beca 18*.³ The goal was to mimic the style and design of real resumes for the correspondence audit study conducted afterwards. Names of actual beneficiaries of all social programs in Peru, including *Beca 18*, are public information and available in the websites of the corresponding agencies.⁴

For this paper, we construct a dataset based on the resumes and were able to gather information for a subset mainly covering beneficiaries that attended 3-year colleges in STEM-related fields as well as management (N=62).

Table 1 presents the main features of those resumes. In Panel A and column (1), we find that almost 3/4 of the applicants are males (based on the first name). This is expected, as STEM in Peru is also a male-dominated field. As in many other Latin American countries, ethnicity and racial information is conveyed by a person's last name in Peru. In the region, it is a norm to list both paternal and maternal last names (and in that order). We find that 34% of the candidates have an indigenous-sounding paternal last name and 27% a maternal one.

Besides that information, all the other elements of a resume are listed depending on the preferences and choices of the applicants. For instance, still

³After *Beca 18* was created, smaller programs have started with a much more narrow focus (e.g., for children of public school teachers) but without the merit requirements as in *Beca 18*.

⁴The study was approved by the University of Connecticut's IRB (H18-256).

in Panel A, we see that half the applicants included their year of birth and less than 30% added their age. Indeed, 41% do not provide either. In Panel B, we see that the choices extend to whether to include a photo, a short narrative describing their skills and goals (labeled as “description” in Table 1), whether to include any awards or merit obtained while in college (e.g., top 10% of their class), add information about their graduation year, information about where they attended high school, and so on. As such, resumes vary in length, with the average resume having 3.2 pages. However, this is unequally distributed, as the median length is just 2 pages. This is driven by some applicants choosing to add copies of their academic certificates and other documents as part of their resumes. Some even included scanned copies of their national ID card. Excluding resumes with those additions, the median length is still 2 pages but with an average length of 2.2 pages.

In the last row of Panel B, column (1), we show that the strategic behavior of the *Beca 18* awardees includes whether or not to list the scholarship itself in their resumes. We find that only 8% listed the scholarship. This rate is much lower than those listing academic merit while in college (35%). Yet, *Beca 18* is much more selective (the success rate is less than 6%), while the academic merit listed in the resume refers at best to be in the top 10% of their class. As a signal for relative success, candidates should have selected to include *Beca 18* instead of college academic awards.

In Table 1 we also explore how those listing *Beca 18* in their resumes compare to those who don't in terms of the other signals they choose to add in their resumes. The corresponding means for those listing the scholarship

Table 1: Information included in resumes

Variables	All (1)	Listing <i>Beca 18</i> (2)	P-value (3)
Panel A: Demographic variables			
Male	0.73	0.40	0.22
Indigenous paternal	0.34	0.20	0.51
Indigenous maternal	0.27	0.20	0.72
Added age	0.27	0.20	0.72
Added year of birth	0.51	0.40	0.64
Panel B: Other variables			
Number pages	3.24	2.00	0.01
Photo	0.85	0.60	0.32
Description	0.95	1.00	0.08
College merit	0.35	0.40	0.80
Added graduation year	0.75	0.60	0.53
Added high school data	0.38	1.00	0.00
Number of jobs	2.34	3.00	0.34
Number of projects	1.26	0.80	0.47
Number of references	0.48	0.20	0.25
Added certificates	0.18	0.00	0.00
CV has typos	0.21	0.00	0.00
<i>Beca 18</i>	0.08	1.00	.

Note: columns (1) and (2) report mean values. The p-values for the null hypothesis that the mean difference between resumes with and without *Beca 18* is zero are shown in column (3).

is shown in column (2) and in column (3) we present the p-values of the null hypothesis of equal means between those listing or not *Beca 18*. Those listing *Beca 18* have shorter resumes. This is because they tend to avoid adding copies of their certificates. On the other hand, they are more likely to add a narrative describing their abilities, as well as information about their high school. Further, their resumes do not have typos, which suggests that they

paid close attention to the information contained in their resumes, so the items listed (and missing) there are more likely to be strategically chosen.

3 Perceived vs. actual returns

Agüero et al. (2022) argue that the low share of resumes listing the scholarship could be driven by beneficiaries perceiving that the net return of *Beca 18* to be negative in terms of callbacks. On the one hand, winning this scholarship provides evidence that the person is a talented student. It shows not only higher cognitive skills but also soft skills such as grit and perseverance, mainly from the person's ability to perform well academically despite growing up in (extreme) poverty. On the other hand, there is the fact that *Beca 18* is for the poor only. Thus, the authors argue that actual beneficiaries *perceive* that the poverty signal dominates the ability signal.

However, we do not have information on whether such perception is correct. To address this issue the authors conducted a correspondence audit study. They responded to almost 900 job ads looking for entry-level workers with a college degree (from 3-year and 5-year colleges). They sent four resumes to each add, where every item of the resume was randomized and only two resumes (per set of four) listed *Beca 18*.

The authors find that the labor market values *Beca 18*. Resumes that randomly listed the scholarship receive a 20% higher callback rate compared to those that did not. Thus, in the labor market the ability signal dominates the poverty signal. This means that beneficiaries choosing not include the

scholarship are leaving money on the table: their callback rates could be higher had they included their scholarship information.

4 Policy implications

Combining the findings of this paper with the results from Agüero et al. (2022), there is a clear low-cost intervention. *Beca 18* beneficiaries should be encouraged or nudged to add the scholarship in their resumes. After presenting a preliminary version of these findings to Pronabec, the organization is doing precisely that. They conduct workshops with the cohort of beneficiaries that are about to graduate from college on how to apply for jobs. There is now a specific session on building a resume, which encourages awardees to include *Beca 18* in their resumes. The workshop made a template to ease the process. A (redacted) example is shown in Online Appendix Figure A1. This is part of a larger campaign launched by Pronabec labeling their beneficiaries as talents (*talentos* in Spanish) and including the hashtag #SoyTalento in all Pronabec's social networks.

More recently, Pronabec has created a website where employers can find a large database of resumes of *Beca 18* recipients as well as beneficiaries from other scholarships. After creating an account at <https://expotalentos.pronabec.gob.pe>, employers are able to review over 24,000 resumes. By uploading their resume to this portal, beneficiaries are able to send a signal to employers about their achievements.

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A Online Appendix: not for publication

Figure A1: (Redacted) Example of the new resume template for *Beca 18* beneficiaries

CONTACT INFORMATION:
DNI: [Redacted]
Dirección: [Redacted]
Correo: [Redacted]
Celular: [Redacted]

PROFILE: # Soy Talento

SUMMARY: [Redacted]

EXPERIENCIA LABORAL: [Redacted]

FORMACIÓN ACADÉMICA: [Redacted]

EXPERIENCIAS ACADÉMICAS: [Redacted]

IDIOMAS: [Redacted]

INFORMÁTICA: [Redacted]

INTERESES: [Redacted]