

How Do Labor Market Signals Impact Young Professionals' Careers?



In Colombia, college graduates who earn a national distinction award for top performance in a mandatory exit exam receive a 7 to 12 percent higher salary compared to peers without the award. This wage premium persists five years post-graduation.



The wage premium is larger for graduates from non-elite institutions than graduates of more prestigious institutions. Workers with signals are more likely to be employed at productive firms, finding roles that align closely with their specific skills.



The observed wage differences are not attributed to differences in human capital but rather to the effectiveness of the signal in the labor market.

CONTEXT

Colombia is a country with disparities in educational outcomes and labor market opportunities. These disparities have particularly negative effects on students from less advantaged backgrounds and, among the college-educated, those who attend less prestigious institutions. In this context, a national academic award is given to top-performing students, based on their performance in a standardized comprehensive exit exam which measures skills that are specific to the student's field of study. This context provides a unique opportunity to analyze how signals, in the form of an academic distinction award, influences early career outcomes in a competitive job market.

PROJECT

The project studies the labor market effects of a nationwide college-exit examination and the National Distinction Award given to students with scores in the top 10 percent. This award allows students to signal specific skills when searching for jobs. Using census-like data, the award's impacts are measured using a regression discontinuity design by comparing the labor market outcomes of award recipients and otherwise identical students lacking the award. These students all have similar levels of human capital and other pre-graduation characteristics. Therefore, we interpret the effect of the award on wages as one of a pure signal.

RESULTS

The signal provided by the award has significant positive impacts on the labor market outcomes of college graduates. Students who receive the award, and thus can signal their high level of specific skills, earn 7 to 12 percent more than identical students who do not have the award ([Figure 1](#)), and this wage premium persists five years after graduation. Notably, the signal benefits mostly those workers who graduate from less prestigious institutions, suggesting that the signal can help overcome potential biases or information gaps associated with the perceived quality of different colleges. Workers can thus find jobs in more productive firms and sectors that better utilize their skills, and this alignment of workers' skills with employers' needs promotes efficiency in the labor market.

The signal appears to benefit mostly less advantaged groups, which suggests that reducing information frictions about student skills could potentially shrink earnings gaps, contributing to greater equity in the labor market. The signal additionally improves the allocation of talent in the economy, providing information about specific skills and thus allowing firms to identify candidates with the qualifications needed to fill positions. This in turn leads to a better match between the worker's field of study and industry of employment. Interestingly, the return to the signal is higher for specific skills less transferable across industries. This suggests that the informational content about the student's specific skills, rather than the mere fact of having a signal, drives the positive earnings returns. The signal enables high-paying firms to hire higher-skilled workers, and it allows workers to find jobs in more productive firms and sectors that better utilize their skills.

Key Concept



SKILL SIGNALING

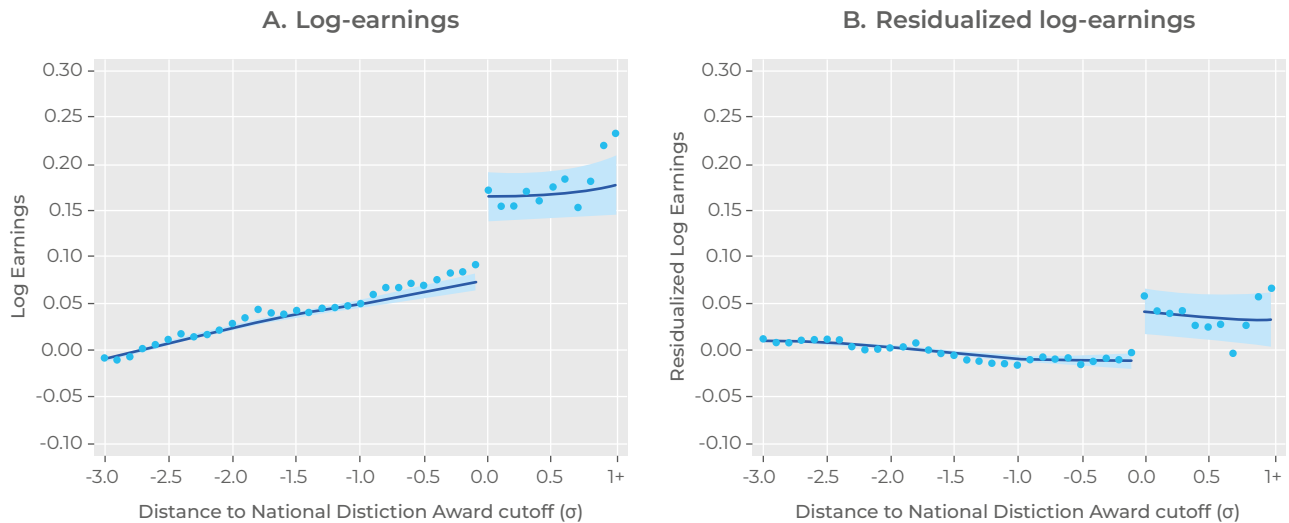
The process through which individuals communicate their skills to potential employers.

POLICY IMPLICATIONS

The study's findings have several important implications for policymaking. First, they underscore the potential value of formal skill certifications in enhancing labor market outcomes for college graduates. This suggests that policies encouraging recognizing and signaling specific skills acquired during higher education could benefit. An open policy question is whether these signals in the form of skills certifications are effective for other populations (e.g., lower-skilled workers and migrants). Second, the findings highlight the role of such certifications in mitigating disparities associated with the reputation of different colleges. Policies that provide opportunities for these students to demonstrate their skills could help reduce biases in the labor market. Third, the findings suggest that formal skill certifications could enhance the efficiency of the labor market by facilitating better alignment between workers' skills and the needs of employers. This could contribute to improved productivity at the firm level and better talent allocation in the economy.

The findings also have implications for employers, who can use academic distinctions as reliable indicators of talent and potential. This can be especially useful in sectors where assessing the quality of candidates is challenging due to the lack of standardized measures. Moreover, the study points to the need for broader support systems for graduates, particularly those from less privileged backgrounds. While academic awards can somewhat level the playing field, comprehensive career support, mentoring, and networking opportunities are also crucial for ensuring equitable access to high-quality employment opportunities. In that sense, this research agenda also contributes to the ongoing debate on the value of standardized testing and academic evaluations. When well-designed and properly implemented, such assessments can impact individuals' career trajectories beyond their educational implications.

Figure 1. Effect of the National Distinction Award (Signal) on Early-Career Earnings



Notes: This figure plots early-career earnings, defined as initial post-college earnings, as a function of the distance of scores (in standard deviations) from the cutoff for the national distinction award. Panel A shows the regression discontinuity in log earnings without controls (earnings are rescaled by subtracting the mean for clarity). Panel B shows the same but adjusting for area-year fixed effects, test scores, and other covariates. Test scores include scores from the high school exit exam and scores from the core component tests (Reading and English Proficiency) of the college exit exam. The national distinction award does not consider core component test scores.



FULL STUDY

[Busso, Matias, Sebastián Montaña, and Juan Muñoz-Morales. 2023. "Signaling Specific Skills and the Labor Market of College Graduates." IDB Working Paper No. 1456. Washington, DC: Inter-American Development Bank.](#)

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