

Statement of Purpose

~~I have been captivated by [field] from the start, especially its subject matter and methods for tackling complex problems. I initially focused on topics related to poverty and inequality. I have recently focused~~ on how cognitive biases drive individuals' decision-making and how these decisions scale to affect both agents' and broader economic outcomes. This curiosity prompted me ~~to hold multiple positions as a research assistant before progressing to a pre-doctoral Research Professional position at the Development Innovation Lab under the guidance of Professor Michael Kremer. All of these~~ experiences, as well as my scientific interests, motivate me to pursue a PhD in [phdname] and join a community of researchers where I can build the abilities required to design and address novel ideas with the potential to impact society in the future.

My main areas of interest are Behavioral Economics, Applied Microeconomics, and Inequality. I am looking forward to using the tools of economics and causal inference to understand how the behavior of individual agents affects their future outcomes and systematically deviates from the standard economic model by analyzing data from experiments in applied settings. In addition, I want to use psychology and behavioral science concepts to address broader concerns about economics; for example, I would like to study the implications of zero-sum thinking and whether there are ways to shift away from it and the effects of peers in the individual and aggregate productivity in team settings.

I would bring a strong research foundation and well-developed mathematical skills to my academic endeavors. I began working as a research assistant during my undergraduate studies and continued until my master's degree. Following a highly competitive selection process, I did an internship at the Central Bank of Colombia, the country's foremost economic research organization. There, I collaborated with Dr. Carlos Medina and Dr. Christian Posso to assess the impact of a vocational training program on students' long-term outcomes. s. At the bank, I gained experience working with large Colombian administrative databases and learned to estimate causal effects using microeconomic techniques. These included event studies, two-stage least squares for instrumental variable analysis, and both parametric and nonparametric methods for regression discontinuity design. Subsequently, I worked with Professor Jorge Tamayo (Harvard Business School) in "[Spatial Mobility, Economic Opportunity, and Crime](#)," where I ran event studies approaches for the reduced-form analysis, and "[Saving for a Dry Day: Coal, Dams, and the Energy Transition](#)" where I estimated the structural model to assess the impact of firms substituting fossil fuels for hydropower before droughts on prices.

35 I also had the opportunity to work with Professor Juliana Londoño-Vélez (UCLA) and
36 Dr. Arlen Guarín (World Bank), assisting them in "[Reparations as Development? Evidence from](#)
37 [Victims of the Colombian Armed Conflict](#)", where the staggered adoption and unexpectancy of a
38 reparations program is used for causal identification. I estimated the Two Way Fixed Effects
39 models and other modern approaches introduced recently. Additionally, I worked on validating
40 the assumptions of the identification strategy using machine learning models to predict treatment
41 status and the timing of payment arrival. Juliana is one of my letter of recommendation writers.

42 These previous experiences taught me causal inference and applied microeconometrics
43 and led me to a pre-doctoral job at the Development Innovation Lab, where I have spent the last
44 two years working with Michael Kremer to extend the lab's education portfolio throughout Latin
45 America. Among the projects I've worked on at DIL are the update of the GEEAP and World
46 Bank [Smart Buys report](#) on cost-effective approaches to improve global learning, as well as
47 various RCTs in Colombia and Peru that assess the impact of interventions with the potential to
48 benefit millions of people, such as air filters in classrooms or conditional cash transfers targeted
49 to mothers with early childhood children.

50 However, the project that has had the most significant impact on me is the project on
51 Adolescent Mental Health in Colombia with several co-PIs, including Gautam Rao and Frank
52 Schilbach. The project seeks to evaluate the effects of brief sessions of problem-solving therapy
53 delivered by non-specialist counselors in schools on students' socioemotional skills, mental
54 health, and learning outcomes and measure the long-term economic impacts of fostering mental
55 health. Although this project is still in its early stages, my scoping work has introduced me to
56 studies in behavioral economics that closely align with my interests. I've seen how my
57 quantitative skills from previous experiences intersect with my primary area of interest,
58 particularly in the connection between behavioral economics, mental health, and economic
59 outcomes. This work has highlighted how behavioral insights can illuminate pathways linking
60 individual agents' decision-making and attitudes with economic outcomes. Michael Kremer and
61 Gautam Rao are my letter of recommendation writers.

62 **My academic record additionally justifies my decision to pursue graduate studies.** I hold a
63 BA and an MSc in Economics from EAFIT University¹ in Medellín, Colombia. I ranked top in
64 my undergraduate class and was awarded an honorific mention for my undergraduate thesis.
65 Nationwide in Colombia, I have always been above the top 90th percentile of standardized test
66 scores; in 2015, I ranked in the 92nd percentile in the Saber 11 test (the national mandatory
67 standardized high school exit exam, similar to the SAT in the United States); and in 2020 the
68 99th percentile on the Saber Pro test (the national mandatory standardized undergraduate exit
69 exam, created to assess the quality of higher education). I have a solid quantitative foundation,
70 demonstrated by my excellent performance in mathematics. I further honed these skills during
71 my master's program, which strongly emphasized quantitative economics.

¹ Master's degree expected graduation 2025.

72 Additionally, I have conducted research independently. For example, in my
73 undergraduate thesis titled "Workforce substitutability: The case of soccer players," I created a
74 player-match level panel dataset containing information on individual and team performance. By
75 leveraging on injuries that are not predictable, I used an event study approach to estimate the
76 effect of the adverse exogenous shocks on the injured players and their team's performance. On
77 the other, in my master's thesis, I studied the effect of marijuana legalization on the consumption
78 of hazardous drugs such as cocaine. I used data from Colombia and a simultaneous model that
79 jointly estimates parameters for equations of access to drugs, the decision to consume (extensive
80 margin), and the quantity consumed (intensive margin), which are subsequently used to perform
81 counterfactual analysis predicting the probability of drug use in an open access scenario.

82 Studying at [university] would be a fantastic opportunity to further my academic and
83 personal goals. The Department of [department] distinguishes itself as a place where the faculty's
84 research interests closely align with my own academic pursuits. For example, [professor1]
85 [professor1_desc], and [professor2] [professor2desc]. Most importantly, I seek a high-quality
86 learning environment with excellent professors and students to enhance my profile and learn
87 from the leaders in the field.

88 In conclusion, I wish to pursue a PhD in [phdname] to strengthen my analytical and
89 critical thinking skills. My goal is to construct academic discussions that will expand the frontier
90 of knowledge and develop and solve my ideas using the skills acquired during my training. I
91 expect to formulate questions that will help better understand human economic behavior. I am
92 certain that pursuing a Ph.D. in Economics at [university] will provide the best opportunity to
93 move towards this aim.