

### **Personal Background and Future Goals**

My objective is to obtain a doctorate in economics with the intention of pursuing a career in academic research and teaching. I am interested in economics because of the frameworks and tools that the discipline provides to address important social questions such as welfare and inequality. For example, economics would allow me to explore the mechanisms by which homeownership affects household wealth accumulation or how monetary policy influences housing affordability differently for various demographics. I want to tackle such questions not just because I am enthralled by the intellectual challenge, but because doing so could yield answers that are beneficial to society. In addition, I would like to pass on what I have learned to tomorrow's generation of researchers and instill in them the curiosity and excitement for research that I have developed and would thus like to integrate teaching into my academic career.

The path that led me to these goals is not necessarily straightforward. During high school, I decided I wanted to do work that could benefit others but had not yet considered academic research as a means of doing so. At first, I was mainly interested in politics and public policy, and I wanted to pursue a law or policy degree before entering public service. I therefore enrolled in a dual-degree program between Columbia University and the Paris Institute of Political Science (SciencesPo Paris), aiming to study subjects that would be useful for such a career. Starting at SciencesPo, I majored in law, completing coursework in constitutional and international law. During my first summer, I interned for MASSPIRG, a public advocacy nonprofit in my home state, where I drafted research-based testimony for Massachusetts state legislative hearings on bills addressing issues such as pharmaceutical drug pricing and predatory lending practices. While I originally undertook this internship with the intention of gaining experience in legislative processes and consumer law, my experiences instead showed me the importance of quantitative methods in investigating which policies are effective and more generally, that a quantitative understanding of society is necessary to even conceive of effective policies. Thus, I began to think that a career in research would be better suited to the kind of work I wanted to do and the kind of questions I wanted to ask. Returning to SciencesPo for my second year, I continued my studies in law, but started to branch out into economics, taking an elective on Asian economies and auditing a course on mathematical methods for economists.

Satisfied with the results, I decided to focus on economics at Columbia. My decision to pursue research was cemented when for a class I read a paper by Lakshmi Iyer (2010) investigating whether direct British rule in India was associated with worse economic outcomes than indirect rule. I was utterly fascinated by the cleverness of the methods she used to identify a causal impact of direct rule, and from then on dreamed about doing similar work in the future. Realizing the importance of quantitative methods, I added a joint mathematics major and statistics minor, completing all requirements in just two years. I pursued advanced coursework, taking graduate-level classes and even a second-year doctoral elective. Continuing my interest in socioeconomic issues, I studied development economics, taking a seminar in economic development which inspired me to pursue an independent study under the supervision of the same professor the following semester, which in turn led to a publication in an undergraduate research journal. During my studies, I worked part-time for the economics department as a research assistant, working with PhD students and faculty. I also became interested in sharing my passion for research with others, joining both Columbia Economic Review and the Journal of Politics and Society. These student-run organizations primarily focus on publishing undergraduate research, but also hold outreach programs and faculty presentations to increase interest and representation in academic research. After graduating, I realized that I needed further *collaborative* research experience, so I applied for full-time research assistant positions, taking coursework in graduate-level mathematics at SUNY Albany as I prepared my applications and studied for the GRE.

I then came to work for the Federal Reserve Board as a Research Assistant in the Real Estate Finance section of the Division of Research and Statistics. Here, I have seen first-hand the ability of economic research to benefit society in diverse areas such as mortgage lending discrimination and financial stability. Even while working on technical tasks such as database management and on policy projects such as house price forecasting, I have actively pursued research in topics such as housing policy and evictions. Just a few months after starting, I coauthored research on house-price growth with my previous section chief, and later pursued my own research on eviction moratoria which resulted in a solo-authored publication. Finally, I sought to give back to the economics community by volunteering to teach programming for economics at



Howard University via the Board-run ECON 181 course, eventually becoming the director of the assessments team and a member of the course's operations committee.

Thus, my plan is to pursue a doctoral degree in economics or finance in order to become a university professor; I am specifically interested in the areas of housing, urban economics and development economics, but have also found questions of interest in labor economics and consumer finance. For the kinds of questions I want to ask, I believe there is hardly better training than a doctoral degree, which will prepare me to do this kind of research in three ways. First, with a strong theoretical foundation, I will be able to frame research questions in a precise and testable manner. Second, with training in empirical methods and quantitative skills, I will be able to seek the data necessary to answer those questions and implement methods to extract an answer from those data. Third, and most important of all, is that attending graduate school with other like-minded students, faculty, and researchers will provide me with an intellectually stimulating environment where I can learn from and be inspired by others' ideas in addition to contributing my own. Moreover, through my participation in undergraduate research journals at Columbia and in teaching ECON 181 at Howard University, I have discovered that I genuinely enjoy outreach and instructing students, and I would like to integrate teaching into my academic career. A doctoral degree will thus provide me with the necessary competencies and qualifications.

### **Intellectual Merit**

My undergraduate academic record and my work at the Federal Reserve demonstrate strong intellectual merit to succeed in a doctoral program in economics and to pursue a productive career in academic research. As a dual degree student, I completed two degrees in only four years. Although my education at SciencesPo Paris focused on law, it is highly relevant because law shapes policy, so a legal background can be highly useful for economic research. A good example is my research on eviction moratoria at the Federal Reserve, which necessitated understanding the differences between various state and local eviction policies, a task that would have been much more difficult without the legal training I received at SciencesPo. Moreover, my program provided instruction in other social sciences such as sociology and history, which is useful for informing research and generating ideas. For example, a knowledge of nineteenth-century Asian history from coursework at SciencesPo sparked my decision to later study economic development at Columbia and ultimately motivated my research on colonial India.

At Columbia, I completed a joint-major in economics and mathematics along with a statistics minor in just two years. I made intense efforts to compensate for the shorter timeframe by taking summer classes and pursuing graduate-level coursework as soon as possible. I was even able to take an elective in industrial development normally reserved for second-year doctoral students. I graduated *magna cum laude*, demonstrating a strong work ethic and desire to learn that will be crucial for success in graduate school and beyond. In addition, I pursued collaborative research by working part-time in the economics department. Notably, I worked with a PhD candidate and a team of other research assistants to study the effects of non-compete clauses in U.S. labor markets by using variation in court enforcement of labor contracts. Drawing on coursework from my statistics minor, I developed a natural language processing program to sort and analyze the thousands of court documents we had collected. I also gained experience with the publication process by proof-reading a game theory professor's journal submissions during the following year.

I also pursued independent research; inspired by my seminar in development economics, I produced two undergraduate research papers; the first was motivated by Iyer (2010) and employed panel methods to study the long-term effects of various land-tenure systems implemented by the British in colonial India, finding that districts which used systems affording more control to farmers tend to have higher consumption and lower inequality in the present day. I wrote the second during a subsequent independent study under the same professor, examining the long-term effects of famine in colonial India using variation in rainfall as an instrument for famine propensity; I found that districts which suffered more from famines are more urbanized and have better infrastructure in the present day, but have lower consumption and higher wealth inequality. Although my original research plan was disrupted by the Covid-19 pandemic (I had obtained funding to travel to London to access colonial-era records from the British Library), I successfully improvised and wrote a high-quality paper which has been published in the [Berkely Economic Review](#). Ultimately, I gained invaluable experience from these projects that will serve me well in a doctoral program.



After graduating, I took additional graduate-level mathematics classes at SUNY Albany, studying functional analysis, convex optimization, and nonlinear programming. I am presently working as a research assistant at the Federal Reserve Board, where I have gained technical and econometric skills that will help me succeed in graduate school and at research in general. For example, I have learned how to use batch scripting, APIs, and web-scraping to automate production and research tasks, and how to use parallel computing to work with large datasets such as the FRBNY / Equifax Consumer Credit Panel. I have also learned how to use econometric techniques such as repeat sales regressions to construct price indices and forecasting methods for my section's house-price forecast. Most importantly, however, I have honed my research abilities; just a few months after starting, I coauthored [research](#) with my previous section chief investigating pandemic-induced declines in home listings and if such declines contributed to subsequent house price acceleration. I independently assembled the necessary data from a wide variety of sources, proposed model specifications, and produced all the technical analysis. I also pursued my own research on the effectiveness of eviction moratoria; tracking down and cleaning data on evictions and eviction policies and carefully thinking about specifications that could account for the specificities of moratoria. I found that state-level moratoria were better able to prevent eviction filings than local moratoria but not as much as the CDC moratorium, which has important implications for policymakers. My work resulted in a solo-authored [publication](#) which attracted the attention of researchers at the Princeton Eviction Lab, with whom I was able to discuss ways to more precisely measure the effects of moratoria. This work also became the springboard for a project with another economist examining the impact of moratoria on the performance of investor-owned mortgages. Finally, I am working with my current section chief and another economist to identify the effect of new home listings on the sale probabilities of nearby listings. With these projects, I have worked on all stages of the research process, from conceptualizing the methodology to gathering data to writing up the results. In my collaborative research, my economist partners have assessed my contributions as meriting coauthorship. I believe these experiences both confirm my interest and demonstrate my ability to succeed in academic research.

### **Broader Impacts**

I am interested in economic research because I want to benefit society, and my record demonstrates this through broader impacts. My research at Columbia centered on economic development, and my research at the Federal Reserve focuses on housing policy, both of which have the potential to improve social wellbeing. Moreover, as a member of Columbia Economic Review and the Journal of Politics and Society, I helped publish undergraduate journal articles and essays, recognizing and affirming students' interest in academic research. In both organizations, we also held outreach programs, faculty interviews, and career presentations, aiming to attract underrepresented groups to the field and promote interest in socially beneficial research. For example, I helped organize a panel with urban studies and economics professors discussing spatial segregation and affordable housing in the New York City area.

At the Federal Reserve Board, I have continued such work by volunteering for the ECON 181 course taught by Board staff at Howard University, a historically black university in Washington, D.C., with the aim of increasing participation of underrepresented groups in the economics field. In my first year, I helped grade homework and taught students in office hours. In my second year, I have served as director of the assessments team, working with lecturers to design homework and quizzes and oversee the distribution and grading thereof. In this role, I have also returned feedback to students and worked with them to help them improve their skills. This fall, I will also serve as a lecturer, developing and presenting content on advanced regression analysis. Participating in ECON 181 has been an immensely rewarding experience, especially when former students who graduate from Howard join the Board as fellow research assistants.

Ultimately, the purpose of my career in economics is not only to take on challenging questions, but also to leave a lasting impact and materially improve the world in which I live. To this end, I will continue working to increase representation in the discipline and continue pursuing research in areas which have the potential to benefit society.

**References:** Lakshmi Iyer, 2010. "Direct versus Indirect Colonial Rule in India: Long-Term Consequences", *The Review of Economics and Statistics*, MIT Press, vol. 92(4), pages 693-713, November.