STATEMENT OF TEACHING PHILOSOPHY

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This semester will mark my seventh as a Teaching Assistant at MIT. I have taught a total of 6 classes so far and I am currently teaching another two. I find teaching and learning invigorating, fun and inspiring and my primary aim has always been to share this excitement with my students. My teaching evaluations average 5.96/7, above the departmental average of 5.5, and 6.3/7 when my first semester of teaching, which saw important difficulties detailed below, is excluded. I have always gone above and beyond to be available to my students, and I can cite at least three cases of students who reached out to me after attending my sections. I should highlight that, in addition to lecturing, my experience has also included graduate student advising in the Advanced Research and Communication class that I describe below.

This statement will go over my experience in detail, and then present my teaching philosophy as well as plans for future classes. I provide samples of slide decks and notes used for my previous classes on my website.

Teaching Experience

1. *Undergraduate Labor Economics and Public Policy/Graduate Labor Economics I (Fall 2021)*: This combined undergraduate/graduate class is part of the Labor sequence of the PhD program, and is taught this semester by Professors Joshua Angrist and Heather Sarsons, with an attendance of 25 students, about evenly split into undergraduate and graduate. Together with other fellow TAs, I am in charge of revising and solving problem sets and holding a weekly section on topics that complement the material taught in class, for which I prepare my own material. So far, I have covered advanced theoretical topics on labor demand, labor supply, and econometrics. I enjoy immensely teaching with Prof. Angrist, and following this semester together, he requested me to assist him teaching his forthcoming undergraduate Spring class.

2. *Graduate Advanced Research and Communication (Fall 2020, Spring 2021, Fall 2021)*: This graduate annual class is required for all PhD students, and helps students starting their own research and writing their first paper. Students are required to present research ideas in the Fall semester, and produce a research paper by the end of the year, guided by a faculty mentor that instructors and myself identify for each student. This class has been offered for the first time in AY 2019/2020, so I have been lucky to contribute to structuring my role as a teaching assistant. Specifically, in the Fall of 2020, I proposed and implemented weekly group brainstorming meeting, which I lead and moderated personally. The aim of these sections was threefold. First, knowing from experience how hard the transition to research is, I wished to accompany students and keep them on track with defining their research ideas. Second, I wanted to stimulate peer feedback and demystify the difficulties of research. Third, I wished to make students comfortable and aware that everyone faces similar difficulties and roadblocks, and stimulate them to cooperate and support each other. In sum, I act as an informal advisor for students defining their research ideas, directing them to the relevant literature, and pushing them to connect with faculty. I found advising very gratifying, and after my first year teaching with Professors Amy Finkelstein and Stephen Morris, I was asked to continue for this year by Prof. Morris. My initiative was rewarded by student evaluations that averaged 6.7/7 for the academic year 2020/2021.

3. *Undergraduate Microeconomic Theory and Public Policy (Spring 2019 through Spring 2020)*: This undergraduate class has an average enrollment of 40 students, and covers intermediate microeconomic theory and empirical applications to policy topics. My TA duties included administrative matters, the design of in-class quizzes, problem sets and exams, weekly sections on additional topics and reviews of mathematic and statistical tools, office hours, and responding to student questions on the piazza.com platform, which I suggested for this class. I also introduced use of gradescope.com for the collection and grading of problem sets and midterms. In Spring 2019 I received a 6.3/7 evaluation, and 5.5/7 in the Fall of the same year, which coincided with turnover of the teaching faculty, and saw a fall of the overall class evaluation to 5.3. Students consistently commented that my recitations were fun and engaging, and three of them contacted me after the end of the course for advice, explanation, and recommendation. I helped one of these students with their statement of purpose for the graduate admission, and much to my satisfaction they managed to join the Economics PhD program in the following year. Unfortunately, MIT cancelled teaching evaluation for the Spring of 2020, which saw the challenge of a full digital transition in view of COVID-19. I managed this transition smoothly, earning a nomination to best TA from Professor Nikhil Agarwal who was teaching the class that semester. A particular challenge we faced was administering midterms remotely, ensuring time limits and receipt of students' answers. To solve this problem, I designed a qualtrics.com timed survey, where student could access and upload handwritten questions and graphs, which I then graded on gradescope.com, which still had not developed all the necessary features at the time. As a result, the department head invited Professor Agarwal and myself to hold a department-wide demo to implement this solution across other classes. I also managed to easily teach remotely from mid-semester onwards, keeping my recitation attendance roughly unchanged. Engaged students wrote me with questions and kept in touch following the course.

4. *Principles of Macroeconomics (Fall 2018):* This is a large-enrollment undergraduate class that averages more than 100 students each year. It was my first experience teaching, and the majority of us TAs were inexperienced. As a result, we encountered several difficulties, which resulted in a relatively low overall class rating of 4/7 (corresponding to "neutral" in the scale defined by MIT). I managed to place myself over the average class rating with a 4.6/7, largely a result of the students' frustration with the design of recitations, which were intended to go over the previous week's problem set, and an overly difficult final. I only taught 2 or 3 recitations so I did not have the opportunity to take the class pulse and correct the aim of recitations and teaching style, which I would certainly do now with the experience accumulated since then.

Teaching Philosophy

During these years at MIT, the moments I cherish most were spent in the classroom with students. There is nothing that I found as gratifying and fulfilling as seeing a student's puzzled expression turn into a nod of understanding. On occasions like these, I feel that I am making an impact, and passing on to the next generation what great teachers passed on to me. I see teaching as a fundamental mission of academia, regardless of the context, and I believe that dedication to students should always take precedence.

When it comes to the field of Economics, I believe that we have a mission to make students approach causal, policy-relevant questions, with the best tools available. This fundamental tenet of my personal teaching philosophy applies to undergraduate and graduate classes as well, and should never come at the expense of simplicity. Excessive abstraction should always be replaced by concrete and engaging questions. I had the privilege to teach side-by-side with two exceptional instructors, Professor Agarwal and Professor Angrist, whose classes taught me a lot on how to engage students and always model the class as an ongoing conversation, where the professor acts as a guide without presumption, almost a first among peers.

Implementing this philosophy requires two fundamental ingredients. First, the concepts should always be demystified, avoiding jargon whenever possible, and using concrete examples, metaphors, and also humor to keep the students engaged and attentive. Second, student participation should be incentivized in any way possible, asking numerous questions and resorting to "cold-calling," without ever being intimidating and calling on different students each time. Again, these principles should apply to both graduate and undergraduate instruction, in order to build an inclusive and supportive environment. When a student steps in a class, we cannot know whether they had any previous exposure to the topics at hand, and I believe it is our duty to make everyone feel included. At its optimum, this strategy guarantees the class understanding, building knowledge about topics collectively and cooperatively.

My personal student experience, and my recent advising experience in the Graduate Advanced Research and Communication class taught me the importance of making the transition to research as smooth as possible. This means accompanying graduate students on this path, and exposing undergraduate students to practical problem-solving and simple research questions. In this process, I found essential sharing my own human and personal perspective in my winding graduate school path. In particular, I admit openly and criticize my own early mistakes, like being intimidated by faculty, and prematurely killing projects for a lack of confidence. This is what I tried, and I believe succeeded, to accomplish in the brainstorming sections I introduced. Students feel completely uninhibited and free to share their ideas with me. Several students who appeared confused and more insecure at the start of the semester have already started gaining confidence and providing and receiving constructive feedback from their peers.

The common element that brings my teaching and advising philosophy together is the adoption of the student's perspective. This means approaching one's own teaching material as a learner, and each time thinking through the steps that made us understand difficult concepts for the first time. Similarly, this means approaching advising as an advisee, and each time think back to the roadblocks and worries that we had to overcome, communicate our own mistakes and past feelings to students, and help them address difficulties sharing our own experience.

A final and crucial point of my teaching philosophy pertains to inclusion. In my own view, diversity is a value that enriches our perspective on complicated social issues, and equity means giving every single student a platform and a voice to express their view and understanding. A participative pedagogical approach like the one I describe above then leads to a commonly built understanding. What better way to realize inclusion than to make students participate in building their own knowledge together? In addition to racial, gender, sexuality and ability-based prejudice and discrimination, which is our fundamental duty to eliminate inside the classroom, I believe that another important dimension of inclusion pertains to the stigma that still surrounds mental health. Not only shall we assist and support students struggling with mental health, but it is our duty to make them feel accepted and direct them to any and all resources that can improve their well-being.

These are the principles that would guide my classes if, as I hope, I will be afforded the privilege to teach at your Institution. In the next page, I discuss some of the future classes that I aspire to develop and teach.

Future Courses

Drawing on my experience listed above, I am available to teach undergraduate-level microeconomics, macroeconomics, applied and theoretical econometrics, and I would be very happy to advise undergraduates and graduate students on research work. Of course, I am available to teach macroeconomics at any level. Below is a list of classes that I would like to design and implement, if given the chance.

1. *Applied Economic Policy*. This intermediate undergraduate class would draw on my experience teaching *Undergraduate Microeconomic Theory and Public Policy* at MIT. The class would emphasize the use of the potential outcome framework to answer policy questions in all areas of economics. I would like to split the class in three parts. The first part would deal with a framing of causal inference in economics, with an application to the effects of minimum wages on employment, and other accessible difference-in-differences design studies, like the literature surrounding immigration, which would provide a chance to cover more advanced synthetic control methods for the curious students. The second part would move to questions requiring instrumental variable analysis, with a focus on the application to the returns to schooling, and a discussion of the LATE framework and external validity of empirical studies. The final section would cover macroeconomic topics, with an accessible treatment of recent empirical studies using applied microeconomics to answer macroeconomic questions. The theoretical part would give a refresher of fiscal multipliers, and the empirical part would cover studies like Nakamura and Steinsson's "Fiscal Stimulus in a Monetary Union: Evidence from U.S. Regions".

2. *Conducting Economic Research*. This class could be offered at either a thesis-stage undergraduate level or a graduate level. I would like to offer a class similar in spirit to *Graduate Advanced Research and Communication* with some key modifications that I believe would enrich the class. The final objective would be the writing of a short (for undergraduates) or a first (for graduate) research paper. The class would be year-long, with the Fall semester devoted to a presentation and refinement of students' research ideas, and development of effective presentations, while the Spring would focus on the refinement and writing of the paper. In the first few lectures, I would invite more senior faculty to share their insights and help demystifying the research process. I saw a great example of this in the the MIT class I am teaching. In addition, I would personally lead weekly brainstorming sections in groups of students that I would split by interest. One lecture would be

devoted to the research journey from my perspective as a recent graduate student, where other available graduate and undergraduate students would be invited to share their experiences. After this initial period, we would move on to the question of how to identify research questions, and principles on how to write models and conduct empirical research. Ideally, this period should see a few student presentations each week in addition to the lectures. In my experience, I have noticed large heterogeneity in presentation effectiveness, so one of the lectures would be devoted to how to present and structure slides for a presentation: how to write a motivation slide; how much space to devote to literature and introduction; effectively highlighting results and presenting graphs… This lecture would be followed by a workshop were students will be invited to share their impression and ask advice on the presentations they have developed, in the spirit of mock presentations that are common among graduate students.
The Spring semester would see the definition of research topics and a thorough treatment of techniques for effective scientific writing. Regular peer meetings would be organized among students with similar research interests and, like in the class I taught at MIT, they would be paired to faculty who will be tasked with writing a short referee report on the project and meet with students at specified points during the semester. During Spring, the attention of lectures would shift to effective research writing. In addition to references to several style books and principles, we would cover individual research journeys. Something that I would be extremely happy to do is sharing a complete revision process of one of my papers, from the first to the published version. At least one lecture will be devoted to writing effective introductions and abstracts, while another would focus on presentation of empirical results and the importance of notes to tables and figures.

3. *Technological Change and Innovation* (graduate, adaptable to undergraduate). This class would cover technical change and innovation adopting the complementary perspectives offered by labor economics and applied microeconomics, as well as the macroeconomics of growth and innovation. This class would draw directly on my research experience. Approximately half of the lectures would be devoted to endogenous technical change, with applications to the skill premium, and a thorough study of the task framework and the emerging literature on automation and AI. Another half would focus on models of growth and innovation, with a focus on interactions with technical change. I would cover several models of endogenous growth in the spirit of Aghion and Howitt, up to the most recent contributions on radical and incremental innovation.

4. *Principles of Macroeconomics*. I am prepared to teach the introductory undergraduate class in macroeconomics. In particular, I would try to follow the standard outline of short/medium/long run, but generally try to cover more topics than what we did at MIT. This could be achieved by working together with a TA to go over extra material during the Friday sessions. Generally speaking, I believe many students are very confused about what economics is about, and are in dire need of basic knowledge of national accounts and macroeconomics more generally. These topics, while of immense interest for the general audience, are usually misconstrued by the media, and it is of the essence to design a flexible class that adapts to the current events by linking the material in the textbook to current, real world examples. Methodologically, I would try to lessen the emphasis on the mathematics relative to the MIT standard, but would provide extra resources to curious students who want to have an understanding of the formal arguments. Particular emphasis would be devoted to linking the textbook treatment to current empirical techniques and results, which would emphasize that macroeconomics is alive and well, and can be used to answer relevant and concrete policy questions.

5. *Intermediate or Advanced Macroeconomics* (both graduate and undergraduate). I am ready to teach macroeconomics at all levels beyond the introductory classes. In this respect, I believe that

students should be introduced to dynamic macroeconomics by relying on two complementary approaches: two- or three-period models for issues in macro-finance, and recursive methods in infinite horizon for growth, and monetary/fiscal policy issues. Regarding the latter, I have thorough experience in continuous time models, which are at the forefront of numerical methods and could be the subject of a graduate topics class. In addition, students at all levels will have to be able to parse the new empirical literature that relies on methods from applied macroeconomics to answer macroeconomics questions, in addition to the classic literature relying on time series. I am available to teach any part of the graduate macro sequence, from dynamic programming methods, to growth and business cycles.