Research Statement
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I am an applied microeconomist whose research focuses on education and family economics. Within education, much of my research centers on the role of postsecondary institutions in shaping students' outcomes. Specifically, my work address three main questions: can all students realize labor market gains from attending high-quality universities and majors? What institutional factors and supports determine university students' success? And to what extent do universities shape religious and political views? My research in education also examines the long-term consequences of school tracking—the prevalent practice of separating students into achievement-based classrooms or tracks. My work in family economics evaluates the impacts of parental leave policies on households and the costs of these policies for firms. I use quasi-experimental methods that leverage large-scale changes in government policies or unique randomized settings for causal identification.

My work has been supported by multiple grants, including an IDRC Women RISE Grant, a SSHRC Insight Development Grant and an Upjohn Institute Early Career Research Award. My research has been disseminated to broader audiences through outlets such as Market Watch, Berlingske, Brookings Institution, FNTalk, the New York Post and an invited IZA panel discussion. My work has been discussed in several chapters of the official Handbook of the Economics of Education, the CSWEP-SSRC Research Consortium, an academic textbook and a U.S. Congressional testimony.

1. Returns to Postsecondary Education and Determinants of Student Success

The first part of my research explores the labor market returns of important educational choices that most students have to make: the quality of the university and the major that they enroll in. Previous empirical studies have established that students incur large earnings gains from attending selective universities and majors (Hoekstra, 2009; Kirkbøen et al., 2016). A key open question is whether these gains are mainly driven by high-skilled students or can they also be realized by students from the lower end of the skill distribution. In **"Returns to Education Quality for Low-Skilled Students: Evidence from a Discontinuity" (*Journal of Labor Economics, 2018*)** with Pierre Mouganie, we provide some of the first evidence on the labor market returns to postsecondary education quality for low-skilled students. We define education quality as both the quality of university attended and major pursued as students in most countries make these choices simultaneously. We focus on the French educational system, where students have to pass their Baccalauréat exam to enroll in universities. We use a regression discontinuity design that compares students who marginally pass and fail the first round of exams. We show that students who marginally fail but pass on the second attempt, delay their university application. Since universities enroll students on a "first come, first serve" basis, we find that marginally passing raises the probability that students attend universities with higher-ability peers and graduate from high-earning majors (such as science and business majors), without changing the quantity of education pursued. Marginally passing also raises earnings at ages 27 to 29 by 12.5%, which we attribute to the documented increase in education quality. Our findings indicate that low-skilled students experience large gains from access to high quality postsecondary education.

Despite the large labor market returns, university students often fail to complete their degrees or graduate on time. They also enroll in high-earning majors such as science, technology, engineering

and mathematics (STEM) at low rates. Minority students face additional barriers to academic success. For example, women are still largely underrepresented in STEM majors. Low-income students graduate from universities at substantially lower rates than higher-income students. A large part of my research agenda explores how academic supports offered to university students can help address these issues.

I focus on a previously overlooked input into the education production function: the role of academic advisors. Most U.S. and Canadian postsecondary institutions offer students some type of academic advising. Advisors often provide students with personalized support as they help them select courses and majors, give information on academic programs and monitor their academic progress. While advisors have the potential to contribute to students' academic success, empirical evidence on their impacts is scarce. This is because it is difficult to identify their causal effects, as students typically select their advisors. I have three papers on this topic that provide some of the first causal evidence on the impact of academic advisors on students' success. All three studies use unique student-level administrative data which Pierre Mouganie and I acquired from the American University of Beirut (AUB), a selective private liberal arts university. While located in Lebanon, AUB's advising system is comparable to that of selective private liberal arts colleges in the United States such as Williams College. An advantage of AUB however is that first-year students are randomly assigned to academic advisors (who are also faculty members)—allowing us to identify causal effects.

In **"Adviser Value-Added and Student Outcomes: Evidence from Randomly Assigned College Advisers" (*American Economic Journal: Economic Policy, 2022*)** with Antoine Deeb and Pierre Mouganie, we provide the first causal evidence on whether the quality of academic advising influences university students' success. We measure adviser quality using a value-added (VA) framework. We show that adviser quality is a strong determinant of students' academic outcomes. We find that higher adviser VA largely improves first-year (freshman) students's academic performance and 4-year graduation rates. Students declare a major at the end of their freshman year, allowing us to see the impact of advisers on major choice. We show that higher adviser VA increases high-ability students' enrollment in selective majors such as STEM. Overall, our results provide a clear policy recommendation on how universities can address issues of low on-time graduation rates and STEM enrollment: invest in improving the quality of academic advisers.

In a second paper **"The Impact of Advisor Gender on Female Students' STEM Enrollment and Persistence" (*Journal of Human Resources, 2023*)** with Pierre Mouganie, we provide the first evidence on how academic advising can be used to address the issue of underrepresentation of women in STEM majors. A primary goal of governments around the world is to reduce the gender gap in STEM. As a response, a variety of initiatives that offer women mentoring by female scientists have been recently put in place. However, there is no clear evidence on whether the mentor's gender matters in promoting women's STEM attainment. We ask whether the gender of an academic advisor can reduce the gender gap in STEM majors. Our paper follows seminal work by Carrell, Page and West (2010) showing that female science *instructors* increase female students' representation in STEM majors. We exploit our AUB data where freshman students are randomly assigned to advisors who are also faculty members in either science or non-science departments. A key difference between instructors and advisors is that the latter's interactions with students are one-on-one, high touch, and individualized. We show that female students matched to female rather than male advi-

sors from science departments, are more likely to enroll in and graduate with STEM majors. The gender of advisors from non-science department has no impact on students' major choice, highlighting the importance of female role models in the sciences.

Women are also largely underrepresented in the economics profession. In a companion paper **"Does Advisor Gender Affect Women's Persistence in Economics?" (*AEA Papers and Proceedings, 2021*)** with Pierre Mouganie, we examine whether the gender of an economics advisor affects female economics students' persistence in the field. We use a sample of students who first enroll at AUB as sophomores (and not freshmen) after high school with a chosen major. We focus on first-year students with economics as their declared major. These students are randomly assigned to an academic advisor who is also a faculty member in the economics department. We find that being assigned to a female rather than a male economics advisor decreases female students' dropout rate from the major and increases their probability of graduating with an economics degree.

Building off of my work on academic advising, I have been recently interested in how coaching can improve university students' academic and labor market trajectories. U.S. and Canadian universities struggle with low graduation rates, and this issue is more severe among low-income students (Bailey and Dynarski, 2011). Proactive and intensive coaching interventions that focus on enhancing academic skills are effective, but are costly and difficult to scale. In **"Keep Me in, Coach: The Short- and Long-Term Effects of a University Coaching Intervention" (*Revise & Resubmit, Journal of Political Economy Microeconomics*)** with Stefanie Fischer, Pierre Mouganie and Geoffrey C. Schnorr, we evaluate a unique low-cost in-person coaching workshop that focuses on enhancing academically marginal students' non-cognitive skills. We acquired data from a 4-year university in California where students on academic probation are required to attend this 2-hour workshop. During the workshop, students are led through goal-setting and time management exercises by trained coaches. Importantly, the workshop aims to boost self-confidence through delivering the message that failure is normal and that it is still possible to succeed despite failure. Using a difference-in-discontinuity design, we show that coaching improves students' academic performance and dropout rates. Low-income students benefit the most as the program also increases their 6-year graduation rate. We link our student data to administrative files from the State of California's Employment Development Department (EDD), which include labor market information for all employment covered by California's unemployment insurance. This allows us to provide some of the first causal evidence on the impact of coaching on labor market outcomes. We find that coaching has no effect on employment rates but boosts low-income students' earnings in their mid-20s. Taken together, our results suggest that providing academically marginal students with coaching, designed to improve their self-confidence, can be a low-cost and effective way to boost their academic and labor market outcomes.

While most of my work focuses on how to improve student outcomes, it is equally important to understand the institutional barriers facing students especially those from low-income backgrounds. In new work in progress, **"The Role of University Policies in Exacerbating Socioeconomic Inequality" (draft available upon request)** with Stefanie Fischer, Pierre Mouganie and Geoffrey C. Schnorr, we document how low-income students disproportionately bare the costs of academic probation, a universal policy used by most North American universities. Previous studies have documented that some students are discouraged and are more likely to drop out due to being placed

on probation (Lindo, Sanders and Oreopoulos, 2010). However, no prior work has focused on low-income students and importantly, on whether probation widens socioeconomic inequality in the labor market—as it is typically difficult to access data on labor market outcomes. We leverage our data from the 4-year university in California linked to the EDD administrative labor market files, which allow us to follow students who first enrolled at the university from 2007 to 2017 into the labor market. Using a regression discontinuity design based on minimum GPA cutoffs, we show that being placed on probation in the first year of university substantially reduces low-income students' 6-year graduation rates and earnings up until age 33. These effects are not observed for high-income students who seem to recover from being placed on probation. These findings not only highlight that probation may hurt students' earnings but importantly, that it widens socioeconomic inequalities in the labor market.

In an ongoing project on the labor market returns to universities, I am working with Stefanie Fischer and Pierre Mouganie on evaluating the impact of the University of California's (UC) Transfer Admission Guarantee program (TAG). TAG is a program that allows students in California community colleges to transfer to a UC university if they meet minimum GPA and course requirements. TAG could constitute an important engine of social mobility if it allows low-income students to access 4-year universities, but no previous study has evaluated this program. We are currently working with one California community college on collecting data for its TAG applicants. We will eventually use a regression discontinuity design that compares TAG applicants who exceed GPA cutoff (and are eligible for UC enrollment) to TAG applicants who do not meet minimum GPA cutoff (and are not eligible for UC enrollment). This allows us to examine the educational and labor market returns of graduating from different types of postsecondary institutions (i.e., UC universities versus community colleges). If we find that TAG has substantial educational and labor market returns, we are also planning to conduct a field experiment which incentivizes the use of TAG among eligible students.

2. The Role of Universities in Shaping Political and Religious Views

Universities do not only impact academic and career trajectories, but they can also expose students to new cultural and political ideas. A second and relatively new line of my work is to understand whether and how universities affect individuals' political and religious views and attitudes. One way universities can impact these views is through exposing students to peers from different backgrounds. In **"The Impact of Religious Diversity on Students' Academic and Behavioral Outcomes" (*Revise & Resubmit, Journal of Labor Economics*)** with Antoine Deeb and Pierre Mouganie, we ask whether exposure to peers from different religious backgrounds affects students' academic performance and tolerance or openness towards members of other religions. Previous studies focus on interactions between peers from different races or socioeconomic backgrounds (Carrell, Hoekstra and West, 2019), but evidence on inter-religious interactions in universities is scarce. It is typically difficult to find data that include measures of students' religious backgrounds, and students in most settings are not randomly assigned to peer groups which limits causal identification. Our AUB data are ideal to addressing both these issues and allows us to provide some of the first causal evidence on inter-religious contact in educational settings. We focus on peer groups formed through the random assignment of students to advisors. We show that students assigned to the same advisor also enroll in the same courses and therefore have opportunities to interact with each other. Before university, students attend either secular or religious (Christian or Islamic) high schools—which dif-

fer in whether they provide a religious education and the religious diversity of their student body. We use students' high schools as a proxy for their religion. As a measure of tolerance, we look at whether students are more likely to enroll in courses with instructors of different religions. Our setting is well-suited to study this question as Lebanon has a long history of violent conflicts between Christians and Muslims. We find that for students from religiously homogeneous schools (Islamic), exposure to more diverse peers (i.e., to peers from Christian rather than Islamic schools) improves their academic performance, and makes them less likely to enroll in courses with Muslim teachers. These findings highlight that contact with university peers from different religious backgrounds is a strong determinant of students' academic success and improves tolerance and trust towards other religions.

While this study establishes that inter-religious interactions improve attitudes towards other groups in the short run, it is unclear whether these effects persist long after students have left the university. It is also unclear whether the strength of these effects changes in different political contexts. To address these gaps in the literature, I am currently working with Ali Abboud, Samuel Bazzi, Antoine Deeb and Pierre Mouganie on a project that looks at how inter-religious university interactions affect long-term political and religious views. We use the same AUB data which allows us to exploit the random assignment of students to peer groups. We are further running a survey among AUB graduates over the last 20 years. Having these survey responses will allow us to see whether inter-religious peer interactions at the university affect views in the long term, for how long and whether these views change with different political shocks in Lebanon. We have been working with different offices within AUB to coordinate running the survey and linking it to our data. We also developed the survey questions and have just received approval from AUB's research ethics board. We are currently coordinating with the university's alumni office to administer the survey.

Another new direction for my research is to examine how universities can contribute to the spread of political ideologies. In a new ongoing project with Samuel Bazzi, we focus specifically on the role of the American University of Beirut (AUB) in the spread of the Arab nationalist movement. By the mid-1950s, Arab nationalism—which calls for the unification of Arabs under one nation—became one of the most prevalent ideologies throughout the Middle East. Within AUB, Arab nationalist ideas started to spread in the 1930s. Some of the most influential Arab nationalist intellectuals like Constantine Zureiq and Michel Aflaq were professors at AUB and often gave widely-attended lectures on the topic. During that time, AUB was the most prestigious university in the Middle East and graduated the political and intellectual leaders of the region. For example, the five founders of the Arab Nationalist Movement, an influential pan-Arab organization, all graduated from AUB in 1952. Qualitative evidence indicates that they were heavily influenced by Constantine Zureiq and their membership in *Al Urwah Al Wuthqa*, an AUB student society that disseminated Arab nationalist ideas and published a magazine by the same name. I am currently working on collecting and digitizing extensive historical data from AUB's archives. The data include information on all students enrolled at the university from 1900 to the 1960s, their later life outcomes and political affiliations, membership in *Al Urwah Al Wuthqa* student society, content and dates of lectures on Arab nationalism and the *Al Urwah Al Wuthqa* magazine. Using this data, we plan to study how the university environment determines students' future involvement in Arab nationalism and whether AUB graduates contributed to the spread of this ideology throughout the region.

3. School Tracking

Students are often divided from an early age into different types of education based on their academic achievement. This practice, referred to as school tracking, is prevalent around the World. Nonetheless, the extent to which students are tracked varies substantially across countries. In Europe, students are separated into vocational and academic tracks that offer different curricula, degrees and career options. On the other end of the spectrum are countries like the United States, Canada and China which group students into achievement-based classrooms within comprehensive academic schools. Tracking is controversial because it may increase socioeconomic inequalities, as low-income students are disproportionately assigned to low-achieving tracks. Over the last few years, I have worked on several projects that look at the labor market and social impacts of these different ways of tracking.

In my first paper on this topic, **"The Long-Run Effects of Reducing Early School Tracking" (*Journal of Public Economics, 2020*)**, I study the European tracking system by focusing on France where up until 1975, middle school students were separated into vocational and academic tracks at age 11. I examine the labor market consequences of a reform that delayed the placement of students into these tracks by two years, and instead allowed them to be separated in ability-based classrooms at age 11. This paper makes two contributions to the previous literature on school tracking. First, while much of the literature looks at the impact of tracking reforms on educational outcomes, much less is known about their impact on labor market outcomes. Second, a unique feature of the French reform is that it does not completely eliminate tracking. Instead, it replaces the separation of students into academic and vocational tracks with grouping students into ability-based classrooms (often referred to as ability-grouping). This paper thus provides suggestive evidence on the implications of moving from the rigorous tracking system that is traditionally found in Europe to a more flexible system akin to the one prevalent in the U.S. and Canada. Using a regression discontinuity design based on a date of birth cutoff, I find that the reform increases students' level of education by reducing the share vocational degrees and increasing the likelihood of attaining technical degrees which are accessed through the academic track. The reform significantly increases wages at ages 40 to 45; and these benefits are concentrated among individuals from low socioeconomic backgrounds suggesting that ability-grouping may better promote social mobility than more rigorous forms of tracking.

In a follow-up new working paper, **"The Impact of Delaying Early School Tracking on Fertility and Marriage Outcomes" (draft available)**, I provide new evidence on the causal impact of reducing early school tracking on long-term family formation. A long line of empirical work looks at how family formation is affected by increasing quantity of education, but the link between family formation and the quality of education is less clear. Furthermore, no prior work has examined how school tracking affects fertility and marriage. Using the same prior French reform and a regression discontinuity design, this paper seeks to fill these gaps in the literature. I find that reducing early tracking increases completed fertility for both women and men from low socioeconomic backgrounds. The reform has no impact on marriage, cohabitation or divorce rates but it does affect spousal characteristics. Specifically, women are more likely to have a spouse who is in a high-skilled occupation and is closer to their ages. Taken together, results indicate that moving from a rigorous tracking system to grouping students in ability-based classrooms has not only important consequences for

individuals' careers but also shapes their long-term social outcomes.

In a recent related paper **"Does Reducing Early School Tracking Affect Health Behaviors?" *(AEA Papers and Proceedings, 2024)***, I examine whether this same reform affects individuals' long-term health behavior such as smoking, diet, and access to preventive care. Health behaviors are strong determinants of health outcomes and mortality. A long body of work has looked at the relationship between quantity of education and health. However, less is known about how quality of education and in particular tracking affects health. In this paper, I use data from a nationally-representative health survey and show that the French reform significantly increases on-time preventive screening for chronic illnesses at age 47. Specifically, individuals exposed to the reform are more likely get cholesterol and glycemic index tests at the frequency recommended for their age. The reform has no impact on other health behaviors such as smoking, diet, exercise and alcohol consumption.

In a third paper, **"The Long-Run Educational Benefits of High-Achieving Classrooms" (*Forthcoming, Journal of Policy Analysis and Management*)** with Pierre Mouganie and Peng Zhang, we study the milder form of tracking that is typically found in North America and China. Two unique features of this paper are that we focus on ability-grouping within high school as opposed to middle school (as in Card and Giuliano, 2016) and we are able to look at longer-term outcomes such as university enrollment. We collect unique administrative data from a selective Chinese high school where students are assigned to either high-achieving or regular classrooms based on a cutoff on a common test. Students in high-achieving classrooms are exposed to an accelerated curriculum, better teachers and higher-achieving peers. Using a regression discontinuity design, we find that being placed in a high-achieving versus regular classroom substantially increases students' performance on common math tests, but has no impact on their performance in English or Chinese languages. We also find that high-achieving classrooms raise the likelihood that students enroll in elite universities, as well as their scores on the national university entrance exam—the sole determinant of university admission in China.

4. Parental Leave Policies

While educational experiences are an important determinant of individuals' life outcomes, the family environment is equally consequential. The fourth part of my research agenda sheds light on the interaction between government policy and the family environment. Specifically, I focus on the implications of family-friendly policies for households and the costs of these policies for firms.

Most governments provide new parents with paid parental leave as that these policies can reduce gender gaps in the labor market and improve children's development (Rossin-Slater, 2018). However, the design of leave programs may greatly influence their impact. Many countries especially in Europe provide very long periods of paid parental leave. In **"Parental Leave, Household Specialization and Children's Well-Being" (*Labour Economics, 2022)***, I present new evidence that offering up to 3 years of paid parental leave can work against several of these programs' intended goals. I focus on a French reform which extended leave benefits to parents whose second child is born after July 1994. I use a regression discontinuity design based on the second child's date of birth along with two nationally-representative surveys containing information on parents' labor market outcomes and children's development in the short run. I find that the reform increases household

specialization by inducing mothers to exit the labor force and fathers to increase their working hours. Specialization could play a key role in exacerbating gender differences in the labor market. I further show that children whose parents are eligible for the long leave, are less likely to have normal scores on tests that assess their verbal skills at ages 5 to 6—suggesting that the leave harms or delays their verbal development.

Parental leave programs are often believed to be costly for firms. This claim is at the center of debates in countries that are considering introducing national paid leave programs such as the United States. However, there is still no conclusive empirical evidence on how these policies impact firms. In **"Is Parental Leave Costly for Firms and Coworkers?" (*Forthcoming, Journal of Labor Economics)*** with Anne Brenøe, Nikolaj Harmon and Heather Royer, we examine how firms and coworkers are affected by women's take-up of up to one year of paid leave. We leverage Danish administrative data which contain the universe of workers and firms from 2001 to 2013. We use a dynamic difference-in-difference design which compares small firms in which a female worker gives birth to those in which no female worker gives birth in the same time period. Employees in our sample take on average nine and half months of leave. We show that firms adjust to employees' leave-taking by hiring temporary workers and increasing coworkers' work hours. Through these adjustments, we show that firms are able to fully compensate for labor supply lost due to their employee's leave as we see no changes in the firms' total hours of work. Since firms are reimbursed for women's leave payments, leave-taking has no effect on firms' total wage costs. We also show that firms do not experience a decline in their output, profit or their likelihood of survival. Overall, our findings suggest that the costs of parental leave on firms are negligible.

Because of my work on parental leave, I was invited to write a paper synthesizing the empirical literature on parental leave **"Maternity leave and paternity leave: Evidence on the economic impact of legislative changes in high income countries" (*The Oxford Research Encyclopedia of Economics and Finance, 2022)*** with Anne Sophie Lassen, Philip Rosenbaum and Herdis Steingrimsdottir.

I plan to keep working on the broad topic of parental leave and I currently have two ongoing projects. The first studies how different leave provisions affect children's long-term outcomes. Parental leave policies typically guarantee parents their right to return to their old job after leave expires (job-protection) as well as wage replacement. Previous studies have established that parental leave programs benefit children of parents who take those leaves (in terms of their education and labor market outcomes). However, these studies typically evaluate reforms that extend simultaneously the duration of job-protection and wage replacement and hence cannot establish which of these elements contributes to children's effects. In an ongoing project, I plan on addressing this gap in the literature by evaluating the impact of two French reforms on children's long-term outcomes. One of these reforms extended the duration of job protection while the other the length of wage replacement. I am currently collecting data for this project.

The second project examines whether access to maternity leave impacts women's reporting of domestic violence and gender attitudes. Maternity leaves can play a key role in empowering women through increasing their economic opportunities and promoting gender equality within the household. To answer this question, I combine detailed data on domestic violence along with a recent

extension in the duration of maternity leave benefits in Turkey, a country with high rates of violence against women and gender inequality. The leave extension was based on children's date of birth, which allows me to use a regression discontinuity design and provide some of the first causal evidence on how maternity leaves affect intimate partner violence and gender attitudes.

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