Research statement

My research is in development economics with a strong emphasis on field work and field experiments. In one part of my research agenda I study microfinance markets, where I examine how loans can be made to be more conducive to business development and how the incentives of loan officers shape lending activities. My other main area of focus is questions of political economy, such as collective action problems and decision-making procedures that determine service delivery, through the lens of development programs.

My research approach primarily relies on the design, implementation, and analysis of randomized field experiments. The experiments are large, typically with thousands of participants. Rather than evaluating the overall impact of a program, I design the treatments and data collection in ways that allow me to determine mechanisms and test theories, in order to learn lessons that to go beyond the immediate context of a specific program.

In terms of geographical focus, my research is focused on East Africa, primarily Uganda, where I have implemented several projects with the collaboration of one of the world's largest NGOs and microfinance providers, BRAC. By spending substantial periods of time in the field over the past eight years, I have built a network and gained the confidence of the organization to design experiments that take place within the context of their existing program activities, thereby enhancing external validity and policy relevance. For instance, in two ongoing projects I collaborate with BRAC and introduce variation in the contracts of their employees, which allows me to learn about the importance of particular contract features for effort and contract compliance.

Microfinance markets

The area that I am currently most active in is research on microfinance markets. "Microfinance" is an umbrella term for small scale financial services extended to poor individuals and firms. Currently, a large share of loans in low-income countries fall into this broad category, which makes this market important to study as an extension of the traditional sub-discipline of "Finance". In my research I study both demand and supply side aspects of the microfinance market, to answer questions such as "Is there adverse selection in the microfinance market?", "How does loan contract structure interact with the production function of firms?" and "How do loan officer incentives affect the borrower pool and type of loans given?". In what follows, I will briefly discuss my finished, ongoing and planned projects.

Two of my most recent projects focus on borrower selection and behavior. In **"Loan Contract Structure and Adverse Selection: Survey Evidence from Uganda"** (Journal of Economic Behavior and Organization, 2020, joint with Selim Gulesci (Bocconi), Andreas Madestam (Stockholm) and Chris Ahlin (Michigan State)), we study how selection into borrowing is affected by loan contract design. We surveyed a representative sample of 925 small firm owners in urban Uganda. As part of the survey, firm owners were faced with a series of hypothetical loan contracts in a design that enables us to study the selection into borrowing as contract terms are changed. Existing empirical work on credit market behavior in developing countries is focused on samples of existing or previous borrowers, and can therefore not speak to selection. Our advantage is providing a representative firm sample, 80% of which consists in firms without borrowing experience. Using this sample, we are able to test seminal theoretical models in contract theory about the nature of self-selection in credit markets and find support for the adverse selection model of Stiglitz and Weiss (1981): when the costs of borrowing (interest rates or collateral) are lowered, safer types crowd into borrowing.

Building partly on the above study is an ongoing project: **Inside the Production Function: The Effect of Financial Contracts on Growing Firms' Technology Use** with Selim Gulesci, Andreas Madestam and Francesco Loiacono (Stockholm), which is currently in its advanced stage. The project is a large-scale randomized control trial (RCT) involving 2,400 small Ugandan firms, and aims to understand the slow rate of firm growth in developing countries, even when they have access to credit for investment. We propose a novel explanation for this phenomenon, namely that the interaction between loan contract structure of typical credit products offered to poor firm owners, and the firm's production function causes obstacles for investments. To test this conjecture, we experimentally vary loan contract features for firms that are approved for loans with BRAC Uganda's Individual lending program: to 400 firms, we introduced a grace period to allow more time for learning how to productively use new investments, to 400 other firms we offered more flexibility in the repayment schedule, while 400 additional firms were given a larger amount paid out upfront. The remaining 1,200 firms belong to one of three different control groups. This design allows us to distinguish between uncertain returns, lagged returns and bulky investment costs as impediments for productive investments, and study the causal effect of loan contract structure on the repayment performance and on the nature of investment choices of the firms. We followed and collected frequent data on each firm for 24 months and are currently conducting a long run follow up survey. The earlier stages of the project were funded by grants from the ESRC and the Swedish Research Council, and more recently we received a follow-on grant from the ESRC in 2019 and a grant for COVID-related research from the IGC in 2020. It is pre-registered in the AEA registry for randomized controlled trials with number: AEARCTR-0003062.

In two interrelated ongoing projects, both with Erika Deserranno (Northwestern) and Lame Ungwang (Friedrich Schiller Universität), we shift the focus from borrowers to loan officers employed in microfinance institutions, and zoom in on their incentives. We partner with BRAC Microfinance in Uganda, one of the largest micro finance institutions in the country with more than 200,000 active borrowers, and implement two randomized field experiments affecting group lending personnel in local branch offices. Both projects study agency-problems in the context of managerial practices in the microfinance sector.

The first ongoing experiment, initiated in September 2018, will investigate performance-based bonus policies. One commonly proposed tool for addressing agency problems is the provision of financial reward schemes, or bonuses. In organizations with a social mission such schemes may perform worse because only certain tasks can be rewarded in this way, and these tend to be the non-social tasks. Earlier research findings also suggest that financial rewards can crowd out employees' intrinsic motivation to "do good", which are of particular relevance to organizations with a social mission. Despite these potential risks, financial reward schemes are pervasive in organizations, and only a number of recent experiments from developing countries have evaluated such schemes. We evaluate the effects of a move from a reward scheme for credit officers that is based on team performance to one based on individual performance. We use a randomized control methodology with randomization at the branch level -106 local offices were moved to the individual scheme while 53 remained with the group-level reward scheme - to ask how individual level as compared to team level bonus contracts affects credit officer effort, team work, staff well-being and borrower pool characteristics. The microfinance setting is particularly interesting for the purpose of evaluating bonus schemes as credit officers are in frequent contact with the borrowers and develop social ties with them. When individual reward schemes are introduced, a credit officer may face a trade-off between monetary returns against social expectations and rewards. Bonuses based on individual effort, as compared to team based bonuses, reduce free riding and may thus incentivize certain credit officers to work harder. At the same time, key aspects of the job require teamwork between credit officers, and a monetary incentive based on the individual level performance might negatively affect effort on these components. The project is pre-registered in the AEA registry for randomized controlled trials with number AEARCTR-0004529. The project has received funding from the Helsinki School of Economics Support Foundation.

The second ongoing experiment, launched in January 2019, examines staff rotation. In microfinance, personal and frequent contact between borrowers and lenders is a necessary norm. As a result, staff often builds relation-specific human capital that can improve efficiency of credit activities, but these personal relationships also increase the probability of collusion occurring between staff and borrowers. Microfinance is therefore a particularly relevant context for the study of staff rotation as a management practice that directly impacts the scope for personal relationships to form between loan officers and borrowers. The study will examine the effect of loan officer rotation on portfolio quality, as well as staff and borrower behavior, types and welfare. For a study period of 12 months, 53 randomly selected branches (local offices) rotate groups between the loan officers every six months, following a schedule prepared by the research team together with BRAC, while 53 control branches perform no rotation during the same period. Detailed administrative and survey data is collected on both staff and borrowers, before, during and after the study period. Whereas a small related empirical literature has so far utilized endogenous organizational policies for loan officer rotation to document features of loan officer behavior and draw conclusions about their incentives, we conduct a randomized experiment in order to isolate the causal effect of implementing a rotation policy. Our experiment introduces exogenous variation in within branch rotation. Moreover, while these previous papers study variation in rotation at the individual level, we randomize rotation at the branch level. This allows us to study organizational responses to - and group level effects of - rotation such as its impact on team work and managerial effort at the branch level. The project also collects data that will enable us to examine questions related to leadership and mentorship of microfinance groups. The project on staff rotation has received funding from the Israeli Science foundation (2019-2022, $190,000) and the Yrjö Jahnsson Foundation (20,000, 2021) and is pre-registered in the AEA registry for randomized controlled trials with number AEARCTR-0004891.

Working in the above-mentioned projects has granted me access to the rich administrative data from BRAC Uganda: a panel of group loans and individual loans for more than 200,000 borrowers spanning seven years. I plan to utilize this data for additional research projects using administrative data and existing survey data from other programs implemented by the NGO BRAC. For example, I will be able to study the interaction between microfinance and the presence of other program services (e.g. health interventions and services for refugees) in a given area or period. I am also interested in studying potential spillover effects of our experimental interventions targeting staff in one program on the incentives and effort of staff working for other programs in the same local offices.

Political economy and development

The other topic area of my research deals with questions related to decision making, collective action and asymmetric power relations. While I study them in the context of development programs designed to deliver services through community groups or meetings, this research connects to political economy for two reasons. Firstly since I am concerned with questions that are traditionally asked by political economists such as "how does a decision rule determine the outcome of the decision", and secondly since development programs, for example those organized around community groups, play an important role in the delivery of many public and financial services in low-income contexts. My work can therefore offer insights into public good delivery that are complementary to those of studies of formal political systems. In the remainder of this section I will briefly describe my finished and ongoing projects in this area.

In my paper **"Leader Selection and Service Delivery in Community Groups"** (American Economic Journal, Applied Economics 2019, joint with Erika Deserranno (Northwestern) and Munshi Sulaiman (BRAC)) we study how the design of rules used for group leader selection affects leader identity and shapes group service delivery. In collaboration with the NGO BRAC in Uganda, we randomly assigned newly-formed Savings and Loan Groups for young women to select their leaders using either (i) a procedure in which final outcomes are decided in a public discussion or (ii) a procedure in which final outcomes are decided in a private vote. The random assignment enabled us to draw conclusions about the causal effect of the electoral rule on election outcomes. We found leaders elected with a private vote to be less positively selected on socioeconomic characteristics than those selected in the public procedure, while simultaneously more representative of regular group members. Furthermore, selecting more representative leaders - through a private vote - results in groups that are more inclusive towards poor members by giving such members more credit and retaining them longer. Three years after their creation, private vote groups were more inclusive than public discussion groups, and importantly this did not imply that they were less economically efficient than public discussion groups. These findings are consistent with elite capture being higher in discussion groups, leading to outcomes that are less representative of the preferences of the average member. The project was partly funded by a two-year grant from the Binational Israel-US Science foundation (2017-2019, \$120,000).

My work on decision making procedures has also led to a collaboration with Vesall Nourani (MIT) and Maya Duru (J-PAL) where we use detailed meeting protocols from a series of lab in the field experiments in farmer groups in Malawi to investigate the anatomy of cooperation and collective decision making in deliberative democracy setups. In the experiments, the speaking order of participants in a deliberative group discussion was randomly varied, which enables us to study questions such as whether we observe herding or information cascades, and to what extent leaders or experts dominate the discussion. The discussions generated group decisions regarding a "club good" to invest in, and data from a public good game conducted after the discussion also provides a unique opportunity to compare preferences expressed in public in the group discussion to revealed preferences measured through contributions in the public good game. While my previous work has isolated the impact of a decision rule on outcomes, this project will allow us to better understand the precise mechanisms that lead to a decision in such a context.

My paper **"Preparing for Genocide: Quasi experimental evidence from Rwanda"** (Journal of Development Economics 2020, joint with Thorsten Rogall (UBC), Evelina Bonnier (Stockholm School of Economics) and Jonas Poulsen (Uppsala)) adds to the literature on collective action and specifically on civilian participation in violence. During the period of 1973-1994, Rwandan villagers had to meet every Saturday to work on community projects. This practice was motivated by development arguments, but was also highly politicized. To estimate the causal link between meeting intensity and participation in genocidal violence we exploit cross-sectional variation in meeting intensity induced by exogenous weather fluctuations: heavy rainfall would results in either the cancellation of the community meeting or in low attendance. We found that an additional rainy Saturday resulted in a significantly lower civilian participation rate in genocide violence, while there is no correlation between rainfall on other weekdays in the pre-genocide period and genocide participation. Our results further indicate that community meetings provided an arena for the local elites to spread propaganda and bring people together. Despite the specific geographical focus of this paper, we argue that examining the possibly negative effect of these meetings is of greater general importance, particularly as community meetings and civic organizations are widely associated with positive processes and high levels of social capital. Our results suggest that such meetings can also be effective vehicles for influencing and controlling a population, and thus, that their impact depends on the political intentions of the leaders in charge.

Future directions

More generally, questions related to poverty and inequality are what led me to pursue a career in economics. Going forward, I hope to develop my research scope in this area by studying such questions not only in low income countries, but also in the context of the OECD. An example of this is my ongoing work with Naomi Gershoni (Ben-Gurion University). We study barriers to graduation in a setting where graduation rates are low and economically disadvantaged groups are overrepresented among the students: vocational technical colleges in Israel. Specifically, we study the effect of task deadlines and focus on a task that was identified as the major obstacle for meeting diploma requirements: the "final project". Together with the national regulator of these colleges, we designed a field experiment where we introduced exogenous variation in deadlines for the final project: treated departments were required to set pre-announced deadlines for project submission and defense, while control group departments set defense dates on a rolling basis as projects were submitted. It has been suggested that pre-set deadlines for a task can serve as a commitment device and thereby increase the probability of task completion and our design will allow us to study the causal effect of deadline on project completion and diploma rates.