Research statement

My research agenda is centered around economic questions related to poverty and household out of poverty strategies in the face of risk. As I am interested in understanding the barriers faced by vulnerable individuals and the policies that can alleviate these, I have studied various social protection programs which aim at protecting households from shocks and supporting their productive investments in human and physical assets. Most of my research takes place in Africa, where some of the most vulnerable individuals live and where a myriad of risks constitutes major constraints to their long-term wellbeing. The methods that I use, in partnership with colleagues from multiple fields, are driven by the research questions that arise. These questions usually call for careful primary quantitative data collection, qualitative fieldwork, and rigorous econometric analyses– three aspects of my research that I greatly value. I have used impact evaluation techniques extensively, including RCTs, to both assess the effect of poverty alleviation policies and identify economic mechanisms at play. My future research agenda draws on my expertise in social protection programs with an extensive network of collaborators to address issues on which limited evidence exists, with the objective to contribute to the knowledge base for building innovative approaches to human development.

My earlier doctoral and post-doctoral work shed light on the relationship between poverty, shocks and social safety net interventions. During my PhD at Virginia Tech, I focused on three key steps of the poverty alleviation agenda: defining and measuring poverty, targeting poor households, and evaluating the impact of anti-poverty interventions. My dissertation, whose chapters were then published in the *Journal of Development Studies*, *World Development* and the *Journal of African Economies*, provides important answers related to multidimensional poverty changes in times of major economic crisis, the selection of beneficiaries of social programs, and the sustained impacts of cash transfers after program termination. My research at UC Davis allowed me to explore further issues related to risk and poverty dynamics by focusing on another type of social protection interventions: index insurance. As part of the Global Action Network and through multidisciplinary collaborations with an international group of colleagues, I developed and applied new methodologies to assess insurance products' ability to protect vulnerable households against shocks. I remain involved in this policy-relevant effort, which has already led to a publication in *Ecological Economics*.

My current research builds on this expertise in the econometric analysis of household data from social protection program, and on my involvement in actual development projects with a large network of collaborators in research and policy organizations. It is organized around three related core areas: the selection of beneficiaries from social programs ("targeting"); the impact of social safety net interventions; and child labor and education.

Targeting has become one of my key areas of expertise after my initial doctoral work. While cash transfers have become increasingly popular as an instrument to address poverty, the selection of beneficiaries remains their Achilles heel– and subject to a heated academic and policy debate. By collaborating with the World Bank, I have analyzed targeting and supported national governments through technical advice and policy work throughout Sub-Saharan Africa. I have published the results from my work in *BMJ Open* and in the *Journal of International Development*. I am currently working on two new targeting studies in Burkina Faso, and on an original cross-country analysis in the Sahel, which is first to compare community-based and statistical targeting methods across nine programs using primary data and a harmonized methodology. I recently presented this work in a World Bank seminar and will submit the paper to the *Journal of Development Economics*. Building on this expertise, I am currently designing an ambitious RCT to compare various targeting methods and the universal delivery of social transfers. This research will be implemented in 2021 in Burkina Faso with funding and operational support from the World Bank. For this project, I have also applied for funding from CEGA to explore geographic targeting using machine learning applied to satellite data and phone record, and to unpack selection mechanisms with behavioral games. Given the originality of this research, its timeliness and its policy-relevance, I intend to publish it in the *American Economics Review*.

A second, closely related line of research, which also builds on my doctoral work, regards the impact of social protection interventions. Using the data from a randomized evaluation that I conducted during my post-doctoral work

at UC Davis, I am measuring the spillover effects of index insurance on the income portfolio and productive investments of cotton farmers in Burkina Faso. This article has been revised and re-submitted to the *World Bank Economic Review*. Using experimental and quasi-experimental methods, I have also measured the demand for the index insurance product using the same data, as well as administrative data from the scale-up program and information from the qualitative fieldwork that I conducted with farmers. This second article has been submitted to *Economic Development and Cultural Change*. In addition to this work on index insurance, I have measured the impact of cash transfers on household resilience in rural Niger. Using data from a randomized evaluation combined with satellite information, I employed experimental and quasi-experimental methods to identify exogenous shocks and the causal impact of the program. This article is an original contribution, as it is the first to focus on the effect of cash transfers on resilience (an important current policy question), employs a novel methodology to measure resilience, and unpacks the channels through which cash transfers increase household ability to cope with shocks. We have submitted it to the *American Journal of Agricultural Economics*. Overall, my research suggests that social protection interventions can be efficient at supporting household livelihoods in the face of shocks, but that important challenge remains for deploying these interventions at scale. While still at the prospective stage, I intend to conduct further research in the Sahel related to the design of shock-responsive transfer programs with my co-authors from the World Bank, for instance by comparing multi-year cash transfers with interventions triggered only when shocks occur.

My third area of research is related to child labor and education. This is an important policy issue in Turkey, which is host to the largest refugee population globally, supported by the largest humanitarian cash transfer in the world (the ESSN program). With my colleagues, we obtained several household datasets on refugee households from the World Food Program, and exploit the eligibility criteria of the program in regression discontinuity design (as well as other methods) to measure the causal impact of the transfers. We measure a large effect on child labor and education among refugee children, which we link with an increased ability to cope with shocks among beneficiary households. In another project, I explore the effect of artisanal gold mining in rural Burkina Faso, a major livelihood in the country and worldwide, but a controversial activity accused of fueling child labor. We collected and analyze spatial and historical data on mines and households living nearby, in a specific region, and use national secondary data on mine permits matched to georeferenced DHS surveys, in order to measure the exogenous impact of mines on child work and education. We do find a negative causal effect of mines on education, but a careful analysis of the mechanisms at play suggests that this increase is due to changes in the expected returns on education rather than a direct increase in child labor. As far as we know, this article is first to analyze the effect of artisanal mining based on primary data collection on mines and miners, and one of the only studies which measure the effect of new non-agricultural activities on rural household in Africa. As both studies are novel contributions to the literature, methodologically rigorous and highly policy relevant, we target high quality outlets such as the *American Economic Journal: Applied Economics.*

Most of my research has been funded by the World Bank and other development organizations which supported data collection for answering policy relevant questions for their global practice. My involvement in actual projects implemented in Africa and elsewhere is not only an opportunity for me to explore economic questions through the design of experiments or quasi-experiments, but also a chance to inform directly policies which support poor and vulnerable households, while keeping an active policy dialogue with policy makers and practitioners. In addition to the funding provided by international organizations– for which I applied internally– I have also successfully applied to the competitive funding agency of ITU (the BAP unit). I have recently submitted applications to several grants – including those from CEGA, and from TUBITAK, the Turkish research funding agency– and plan to apply to European funds in the near future as I join a new institution (such as the MCSA individual fellowship or the ERC starting grant). I have a clear research and publication plan for the next few years, but remain open to new research opportunities, such as the RCT and phone survey that my World Bank colleagues asked me to lead related to an anti-corruption smartphone App in Burkina Faso (currently in progress). Drawing on my extensive research network and on my experience in policy evaluation, I also hope to create new research collaborations with my future colleagues, aligned with their own expertise and interests, and contributing in original and creative ways to the literature.