

I am an applied micro-economist with research at the intersection of development economics, political economy, and behavioral economics. Broadly, my work focuses on improving the capacity of the state to deliver public services by changing the selection, incentives, and motivation of bureaucrats, and also through political empowerment of the marginalized. My research can be divided into four interconnected areas, that I describe below.

### **1- Incentives and Motivations of the State Personnel**

This stream of research examines the intrinsic and pro-social motivations of people and contrasts them with private incentives. Economic theory has long argued that economic agents are driven not just by money but also ‘warm glow’ (Andreoni 1989), altruism (Becker 1974), who they work for (Akerlof and Kranton 2003), and mission (Besley and Ghatak 2005). My research in this stream investigates empirically if the intrinsic motivations of economic agents can be leveraged to improve the selection and performance of public service providers.

I have two papers in this stream.

First, in the “Mission motivation and public sector performance: experimental evidence from Pakistan” *2nd Revise & Resubmit at the American Economic Review*, I study what emphasizing the organizational mission does to the motivation and performance of workers. In partnership with the Department of Health in Pakistan, I randomly introduce health workers to the organizational mission through a video of their manager emphasizing the mission and its importance to them. I benchmark the incentive effect of the mission against financial rewards linked to performance, and track how the two interact. Using data from approximately 21,000 household surveys, the paper finds that mission motivates workers to improve core performance, measured by home visits, by 16%. Mission also motivates workers to perform multiple tasks – they perform more antenatal checks, screen more households for Tuberculosis, and organize more vaccination camps for children. Financial incentive treatment improve household visits by 27% but does not affect performance on the other tasks. This difference in allocation of effort between one task and multiple tasks leads to financial incentives becoming less effective in improving household visits when the two treatments are combined. Since the mission motivates effort on multiple tasks, workers who receive both treatments do not increase household visits by as much the workers who receive just the financial incentives for visiting more households. More importantly, mission treatment leads to better health outcomes for the client population compared to the financial incentives, suggesting that motivating workers with the mission is a much more powerful strategy compared to providing financial incentives. The paper highlights the effect of mission as an incentive when contracts are incomplete.

My second paper in this stream, co-authored with Saad Gulzar, is titled ““Good Politician”: Experimental Evidence on Motivations for Political Candidacy and Government Performance” published in the *Review of Economic Studies*. In this paper, we focus on the importance of selection of politicians for improving the capacity of the state. We examine whether the supply of politicians can be improved by highlighting pro-social motivations associated with political office, and compare it to the status-quo personal motivations, such as prestige, associated with political office. We randomly highlight these motivations associated

with the political office to a random selection of about 9000 citizens in a field experiment conducted in the run-up to village council elections in Pakistan. We find that more people from the randomly approached sample run for political office when prosocial motivations linked to political office, such as the ability to help the community, are highlighted. The effect of such messages is particularly stronger for people who may be regarded as “high pro-social” types. More importantly, these candidacy decisions are meaningful — the new politicians win elections with higher probability and the subsequent village councils are more likely to make policy decisions aligned with the preferences of citizens. This paper adds to the rich literature on political selection (Dal Bó and Finan 2018) by highlighting that, the hitherto unexplored channel of, non-financial motivations also influences the decision to enter a political race, and that the supply of “good” politicians can be improved by portraying politics as prosocial to citizens.

## 2- Psychology and Performance of the State Personnel

Psychological traits, such as personality traits, have been shown to play a role in economic decision-making (Heckman 2011) but their influence on the performance of workers remains understudied. In this stream of research, I explore if personality traits and preferences of workers influence their behavior on the job, and how these preferences can be used in designing contracts.

I have two papers and two work-in-progress projects in this stream.

In the first paper, “Personalities and Public Sector Performance: Evidence from a Health Experiment in Pakistan” (co-authored with Michael Callen, Saad Gulzar, Syed Ali Hasanain, and Arman Rezae) accepted at the *Economic Development and Cultural Change*, we collect detailed personality attributes of doctors and supervisors from a representative sample in Punjab, Pakistan. We find that the personality types of doctors and their supervisors are correlated with how they perform on their job, finding two interesting relationships between them: (1) Doctors who score high on the Big Five measures of personality and Perry (1996)’s public service motivation questions are less likely to shirk on the job and are also less likely to collude with supervisors to provide false attendance reports. (2) Reforms aimed at removing information frictions interact with the personality traits of principals — senior managers with high personality scores are more likely to take action on information pertaining to the under-performance of health staff. This body of work has helped identify several important areas of research — most importantly, the role of time preferences of agents in designing contracts, which we explore in the subsequent study. In the experiment, we also found inspectors who procrastinate also shirk on fulfilling their monitoring targets. This observation was removed from the published paper but spurred our interest in further exploring if we can customize contracts based on people’s tendency to procrastinate on their job.

In the second paper under this theme, “Using Preference Estimates to Customize Incentives: An Application to Polio Vaccination Drives in Pakistan” (co-authored with James Andreoni, Michael Callen, Karrar Jaffar, and Charles Sprenger) published at the *Journal of European Economic Association*, we take forward the lessons about procrastination by health staff observed in the previous study and attempt to address them through personalized contracts. This paper uses estimates of time preferences measured in real tasks to customize incentive

contracts for polio vaccinators in Pakistan. The experiment follows a convex time budget design of Andreoni and Sprenger (2012); Augenblick et al. (2015) to first elicit incentivized decisions of workers on intertemporal work. We first confirm the vaccinators are present-biased. Then we use their decisions to obtain structurally tailored contracts for each worker for subsequent work. The individually tailored contracts move performance 30% closer to the policy goal overall, and 50% closer to that goal when present bias in decision-making is relevant. We test this policy against several alternatives, including atheoretic, random and broadly tailored contracts, and find it does best in achieving the policy goal compared to all other alternatives. This paper demonstrates the existence of present bias in public service delivery and provides empirical evidence it can be addressed by designing incentives that use preference parameters.

In the first work-in-progress project under this stream (jointly developed with my student, Prashant Bhandhari), we ask if mental health of public sector workers affect their job performance, and can a low cost, cognitive behavioral therapy based, group training intervention help improve the mental health and performance of these workers. The project pilot with sixty four workers revealed promising results of the intervention in the form reduction in mental stress and improvement in the performance of community health workers. In the scale up, we would like to study if the treatment only helps workers with chronic mental health issues or if it helps them learn skills to deal with any stressful situation. We would also like to study if the effects spillover to clients, particularly new and pregnant mothers as they suffer from maternal depression.

I am in the process of implementing a second work-in-progress project in this stream, which theorizes a link between time preferences and the tendency to act dishonestly in tasks that are spread over multiple time periods due to procrastination. This project is being implemented in partnership with my students (Priyoma Mustafi and Dhvani Yagnaraman) and the Department of Health in Pakistan. The project theorizes that in the absence of high expected cost of malfeasance workers who are present biased will procrastinate more on their job, leaving more tasks to be done closer to the deadline. But as the deadline arrives, performing all tasks to meet targets becomes impossible, so the worker dishonestly claims completing the tasks. In a pilot study with community health workers, we saw upward slopping trend in dishonestly claiming completion. Our goal from the full study is to establish this in a bigger sample, and test if there is a correlation between present bias and dishonesty. Once we establish the correlation, the next step is to design incentives to help workers overcome the tendency to procrastinate and test if that reduces dishonest reporting. The project has received funding and baseline data collection is in progress.

### **3- Information Frictions, Moral Hazard, and Technology in Public Service**

I study the problem of information frictions in the delivery of public services using mobile-based information-gathering and dissemination technologies. My research in this stream sheds light on why eliminating information frictions in public-service delivery will not always address moral hazard but technology can help improve performance of the public sector workers.

I have three papers and one work-in-progress project in this stream

The first paper in this stream, “Data and Policy Decisions: Experimental Evidence from Pakistan” (co-authored with Michael Callen, Saad Gulzar, Syed Ali Hasanain and Arman Rezae) was published in the *Journal of Development Economics*. We evaluate a large-scale phone-based monitoring system of a provincial health department, which encompasses nearly 3000 clinics that provide healthcare to a province of 100 million in Pakistan. In this paper we show that the monitoring system increases inspection rates of health facilities overall but only improves the attendance of doctors if the worst-performing clinics are flagged to senior managers. We identify political economy reasons as potential explanations for the weaker-than-expected effect on moral hazard when information frictions were eased through a monitoring system. In a second paper, titled “The Political Economy of Public Employee Absence: Experimental Evidence from Pakistan,” with the same set of co-authors and published in the *Journal of Public Economics*, we argue that the monitoring system had a stronger positive impact in constituencies with higher political competition and weaker impact in areas where politics is captured, potentially creating a patronage channel between workers and politicians that saves the staff from sanction if the monitoring system finds them shirking.

In the third paper, “No bulls: Experimental evidence on the impact of veterinarian ratings in Pakistan<sup>1</sup>” (co-authored with Syed Ali Hasanain and Arman Rezae and published in the *Journal of Development Economics*) we provide information to citizens, instead of managers, on the performance of public workers. We use a mobile-based system to gather information about the quality of service provided by livestock technicians to farmers, and send back aggregated ratings about the best service providers in their area. Farmers equipped with this information received better-quality service the next time. We find suggestive evidence that the effect is driven by changes in the effort of workers rather than farmers switching, ex-ante, to higher-quality technicians.

In a work-in-progress project, tentatively titled “Extending State Capacity with Technology: Interactive Mobile Support to Improve Consistency and Accuracy for Community Health Workers ” (co-PI Erica Field, Kate Vyborny, Laura Stillwell, and Nicola Singletary), we pursue the dual goal of using technology for data management, and promoting algorithm based decision making to improve the quality of the services. We are developing an application to be provided to semi-trained community health workers to collect and manage data on their clients so they can better plan their services based on the needs of the citizens. This application will also be loaded with simple algorithms that can be used to support decision making of the service providers with respect to the medical treatment needed for new mothers.

#### **4- Economic and Political Empowerment of the Marginalized**

In this stream of work, I study how to economically and politically empower marginalized groups of people. The first paper, tentatively titled “Economic and Political Consequences of Credit Policy for Minorities: Evidence from India” (co-authored with S. K. Ritadhi),

---

<sup>1</sup>Old title: “Coordinating Farmers with Cell Phones: Technology Innovation in Livestock Extension in Pakistan”

explores what happens to economic and political well-being of minorities in divided societies when policies aimed to increase economic opportunities are put in place. We use a policy experiment from India to study this question where Banks were asked by the state to extend credit to religious minorities. This policy expanded bank credit to minority households in districts selected through an arbitrary policy rule. Exploiting the policy rule in a regression discontinuity design, we first find that even in a developing state policies for the well being of the marginalized can improve economic outcomes. Second, changes in the economic well-being affect what happens in the political economy but minorities face a blow-back due to these changes. As a result of the policy, right-wing party's vote share goes down whereas minority candidates vote share goes up. These changes in vote shares, particularly of the right-wing party, are driven by areas where minorities' concentration is low. However, it is the minority areas that face the blow-back via an increased in communal and religious riots in their areas.

The second paper, titled "Norms, Beliefs, and Networks: Descriptive Findings on Women's Political Participation in Pakistan" (co-authored with Saad Gulzar and Luke Sonnet), argues that one reason for the gender gap in political participation gap is a discrepancy between what people believe others think about women's political participation and what those people think themselves. We survey women and men from households in 37 communities in Peshawar, Pakistan. In the survey, we collect information about respondents' social and political networks and their beliefs regarding female participation in politics and also what they think others in their community believe about women in politics. Using this data, we first show that expectations of norms around women's political participation are more pessimistic than actual beliefs, for both women and men. Second, despite previous evidence that the household primarily structures women's behavior in patriarchal societies, we find (1) that women's social networks are distinct from those of men in their households and (2) that women's pessimistic expectations about others' beliefs are more strongly correlated with the beliefs of socially proximate women than men in their households. We argue that efforts to reduce the gender gap in political participation may therefore benefit from targeting pessimistic expectations of norms and focusing on women's distinct social networks.

In a follow-up to this paper, we implement a field experiment in rural Pakistan that provides correct information about the beliefs of others to a random selection of households. We also introduce a treatment about alignment in candidate choices of women and men. These two interventions are cross randomized to study if there is complementary between norms and men's concerns about misalignment in political preferences of women and men. The experiment was implemented right before national elections of Pakistan. We used actual voting of women respondents as outcome for the study. The working paper on this project will be released soon, however, in summary, we find that women voter turnout increases when we correct beliefs about norms and also about misalignment in candidate choices. Importantly, we do not find these corrections to lead to additively larger effects, and instead, find that the treatments was more effective in households where men had correct beliefs about one of the two dimensions. Simply, removing information friction on one dimension is more effective if the household already has correct information on the other dimension. This study sheds light on the importance of taking into consideration the full set of concerns in conservative societies instead of focusing on one margin of information friction.

## My papers mentioned in this statement

““Good Politicians”: Experimental Evidence on Motivations for Political Candidacy and Government Performance”, with Saad Gulzar, *The Review of Economic Studies* (2024)

“Personalities and Public Sector Performance: Experimental Evidence from Pakistan”, with Arman Rezaee, Michael Callen, Ali Hasanain, and Saad Gulzar, *Economic Development and Cultural Change* (2024)

“Using Preference Parameter Estimates to Optimize Public Sector Wage Contracts: A Field Study in Pakistan”, with James Andreoni, Michael Callen, Karrar Hussain and Charles Sprenger, *Journal of European Economic Association* (2023)

“No bulls: Experimental Evidence on the Impact of Veterinarian Ratings in Pakistan”, with Arman Rezaee and Ali Hasanain, *Journal of Development Economics* (2023)

“The Political Economy of Public Employee Absence: Experimental Evidence from Pakistan”, with Michael Callen, Ali Hasanain, Saad Gulzar and Arman Rezaee, *Journal of Public Economics* (2023)

“Data and Policy Decisions: Experimental Evidence from Pakistan”, with Michael Callen, Saad Gulzar, Ali Hasanain and Arman Rezaee, *Journal of Development Economics* (2020)

“Mission Motivation and Public Sector Performance: Experimental Evidence from Pakistan”, *2nd Round Revise & Resubmit at the American Economic Review*

“Economic and Political Consequences of Credit Policy for Minorities: Evidence from India”, with S.K. Ritadhi

“Norms, Beliefs, and Networks: Descriptive Findings on Women’s Political Participation in Pakistan”, with Saad Gulzar and Luke Sonnet

## References

**Akerlof, George A and Rachel E Kranton**, “Identity and the Economics of Organizations,” *Working Paper*, 2003.

**Andreoni, James**, “Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence,” *Journal of Political Economy*, 1989, 97 (6), 1447–1458.

– **and Charles Sprenger**, “Estimating time preferences from convex budgets,” *American Economic Review*, 2012, 102 (7), 3333–56.

**Augenblick, Ned, Muriel Niederle, and Charles Sprenger**, “Working over time: Dynamic inconsistency in real effort tasks,” *The Quarterly Journal of Economics*, 2015, 130 (3), 1067–1115.

**Becker, Gary S**, “A theory of social interactions,” *Journal of political economy*, 1974, 82 (6), 1063–1093.

**Besley, Timothy and Maitreesh Ghatak**, “Competition and incentives with motivated agents,” *American Economic Review*, 2005, 95 (3), 616–636.

**Dal Bó, Ernesto and Frederico Finan**, “Progress and Perspectives in the Study of Political Selection,” *Annual Review of Economics*, 2018, (0).

**Heckman, J**, “Integrating Personality Psychology into Economics,” 2011.

**Perry, James L.**, “Measuring Public Service Motivation: An Assessment of Construct Reliability,” *Journal of Public Administration Research and Theory*, 1996, 6 (1), 5–22.