



Rising Scholars Conference  
Economics Student Research Presentations

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I am Tariq Basir, holding a PhD in economics from South Asian University. Currently, I am affiliated as a Research Scholar with the Center for Governance and Markets, University of Pittsburgh. Previously, I was teaching as an Assistant Professor at the Faculty of Economics, Kabul University.

My primary research interests include formal modeling of political processes, game theoretical models of regime change and democratization, Arab Spring and democratization in the MENA region, as well as the political history of Afghanistan.

**Abstract:**

**Concessions, democratization and repression in the face of revolutionary threat**

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This paper tries to address the questions of why political transitions and revolutions happen at certain societies at specific junctures of history, while other societies with similar levels of social, economic and political development do not experience a political transition and continue with the status quo. This paper includes a baseline complete information model of regime change in the line of Acemoglu and Robinson (2001, 2006) class of models, followed by an extension to the case of incomplete information. We develop a dynamic sequential game of political regime change and democratization and focus on the elite side of society which makes it possible for us to derive the conditions for the cases of democratization, concession, suppression, or otherwise a voluntary revolution in a society. Further, in the extension part of the paper, we introduce uncertainty over the repression cost which makes our model different from the existing literature by simultaneously considering a continuous type space and a multi-stage game. Our models allows for the dynamic interaction between elite and citizens and how the dynamics between revolution and repression plays out. Further, our models account for the deep parameters of society such as the demographic composition of society and the income inequality between the poor and rich groups, which is mostly absent in similar incomplete information models.

The comparative statics of our model enable us to specify some favorable parameter conditions for each type of political transition. Our model implies that democratization is more likely in a society in which both the inter-group inequality and deadweight loss cost of taxation is high in a society.

Cooperative autocracy is more likely in societies in which both inter-group inequality and deadweight loss cost of taxation is low. A post-revolutionary society is more likely when inequality is high, and the deadweight loss cost of taxation is high both under autocracy and democracy. Moreover, repression is more likely when the cost of repression to the elite is sufficiently low, where the elite do not democratize nor offer any concession and can preserve the status-quo at no cost.

Further, the comparative statics and predictions of our model yield some important and interesting insights as to the recent and historical real world cases of revolutions. One such interesting insight is regarding the role of inequality and concessions on the prospects for a revolutionary regime change. Some empirical studies show that in the context of Arab Spring some redistributive policies and transfers made out of oil rents may have sustained some regimes of the MENA through an authoritarian bargain while other countries who couldn't sustain this redistributive social contract experienced large waves of destabilizing protests. This observation conforms to the comparative statics of our model with respect to inequality that suggests the inequality reducing channel of highly distributive policies may be one of the reasons that the oil-rich countries like Qatar and Saudi Arabia did not experience any severe wave of Arab Spring protests, while countries like Egypt and Tunisia were affected by revolutionary protests and regime change. Further, going a bit further back in history, the French Revolution is another important case which confirms to the insights from our model. The historical accounts of the event show that the France ancien regime was characterized by a high degree of inequality and a regressive taxation system which served to increase inequality, which also conforms to the implication of our model that prevalence of higher inequality in a society increases the prospects for a successful revolution.

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April Burrage is an economics PhD candidate at the University of Massachusetts Amherst. Her primary research interests encompass the economics of innovation, entrepreneurship, and labor economics. Her research is centered around three primary areas of focus: (i) investigating the institutional drivers of gender and racial disparities in the knowledge economy, (ii) evaluating the productivity of workers in high-growth sectors, and (iii) exploring the determinants that motivate individuals to engage in inventive pursuits. Her job market paper utilizes a novel dataset to examine how state-level innovation policy contributes to enhancing the applicant pool for federal-level innovation policy. Specifically, it investigates whether the implementation of state-level R&D credits increases the participation of women and minority-owned startups in seeking federal funding for their business.

**Abstract:**

**Innovation Policies, Diversity, and Small High-Tech Firms: Evidence from State R&D Tax Credits and Interest in Federal Grants**

Can state-level innovation policies boost underrepresented groups' interest in federal grants? This paper investigates the impact of state R&D tax credits on small high-tech firms' engagement with federal innovation initiatives. Utilizing state business registration records and the System for Award Management (SAM) database, I provide novel empirical evidence of state-level policy effects on firms' interest in federal grants. Through the implementation of a staggered difference-in-difference research design, I find that state R&D tax credits influence firms' interest in federal grants, particularly among women-owned and minority-owned firms. These findings underscore the potential for targeted policy interventions to foster innovation participation and diversity, contributing to discussions on the impact of innovation policy by race and gender.

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**Stanford University**  
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I am a 3rd-year Ph.D. student in the Economic Analysis and Policy group at the Stanford Graduate School of Business. I work in economic theory, where I try to apply mechanism design to social and governmental questions.

**Abstract:**

**Size-Invariant Procurement Auctions**

Understanding the set of games that are simple enough for real-world, potentially cognitively-limited agents to play is among the most important goals of modern mechanism design. When playing in practical games, agents may face a variable number of opponents. Thus, one notion of this simplicity concerns how much agents' equilibrium strategies need to change as the number of opponents increases. In one-dimensional auctions like first-price auctions, the main components of agents' strategies never need to change. In settings in which agents' private information is multidimensional—like many procurement settings—such invariance does not always hold. Building off of the one-dimensional case, I define a notion of size-invariance in multidimensional procurement auctions. I build a simple theoretical model comprised of agents' cost structures and a mechanism designer's constraints and fully characterize the set of direct mechanisms that satisfy size-invariance. Returning to the practical focus of the project, I study first-score auctions—which are widely used in highway reconstruction and energy infrastructure settings—and ask which types of first-score auctions are size-invariant. I show that two versions of this auction used in practice are size-invariant while two other ones are not. This has practical implications. When an auction is more opaque, the chances of an inefficient firm winning because they are better at strategizing increases. Thus, through informing practitioners of these results and recommending size-invariant auction formats over alternatives, we can improve the efficiency of public procurement processes.

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Anwita Mahajan is a PhD student in Economics at Georgetown University. Born in India, she moved to the United States for her undergraduate studies at Dartmouth College. Here, she worked on her undergraduate thesis under the guidance of Professor Douglas Staiger, which went on to be published in the Journal of the American Medical Association. After graduating from college, she worked as a research assistant to Professor Jonathan Gruber at MIT before entering the PhD program at Georgetown. Anwita's research interests lie in the fields of public economics and health. She is particularly interested in understanding how a complex ecosystem of government policy, firms and individual behavioral responses affects health and welfare. Under the expert mentorship of her doctoral advisor Professor John Rust, she hopes to combine compelling empirical evidence with structural modeling to offer insights into optimal policy coordination – one research question at a time.

**Abstract:**

**The Effect of a Minimum Wage Increase on Low-Income Workers' Participation in Welfare Programs**

It is believed that an increased minimum wage results in the reduced dependence of low income workers on public assistance and reduced government spending on welfare. In this paper, I examine this hypothesis by estimating the empirical effects of increasing the minimum wage on participation of workers from low income households in two programs - SNAP (Food Stamps) and Medicaid. I focus on state minimum wage changes between the years 2013 and 2016. I aim to deepen the understanding of the effects of a minimum wage policy by exploring multidimensional explanations for, and heterogeneities in observed effects.

Individual monthly data from the Survey of Income and Program Participation provide information on wages, income, hours worked, program participation and benefits. I obtain data for yearly state minimum wage changes from 2013 to 2016 from the Bureau of Labor Statistics. In my analysis, I use a two-way fixed effects difference-in-differences design that compares individuals from low income households in states with minimum wage increases to those in states without.

I find that increasing the minimum wage has no effect on employment on the extensive margin. Amongst employed workers, minimum wage hikes are associated with small increases in wages and earned income, and reductions in hours worked. I suggest that at least a part of the reduction in hours is supply driven and strategic - prompted by the motive to avoid program ineligibility. Consistent with this mechanism, I see no effects on SNAP participation or benefit amounts.

Further, Medicaid participation increases in response to minimum wage hikes, even after accounting for the concurrent Affordable Care Act Medicaid expansion. My evidence suggests that minimum wage increases are associated with fringe benefit adjustments by firms, especially the reduction of employer sponsored insurance, which may be linked with the increased take-up

of Medicaid as a health insurance substitute. Further, firm responses are heterogenous, and are more prominent after Medicaid expansion, suggesting that the availability of Medicaid in the presence of a minimum wage increase may influence the mix of offered employer benefits.

Overall, my estimates suggest that small state level minimum wage increases might contribute to increased public expenditure on Medicaid, with no savings on SNAP. Because unemployment and cash cliff effects are not observed, these results also imply a net increase in worker welfare.

Individuals from low income households depend substantially on public assistance programs. They are also most affected by changes in minimum wage laws. The conclusions of this paper corroborate the notion that minimum wage changes affect low income workers in a comprehensive way that includes effects on program participation and employer benefits. Minimum wage policy designed with this holistic view in mind will help to boost the welfare of low income households.