

Research Statement

(Long Version)

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My primary interest lies in empirical research in political economy and public economics. My research investigates how characteristics of political environments and the design of government institutions interact with the behavior of public officials, the conduct of regulated industries, the operation of government programs, and social welfare. I have conducted such investigations in three contexts: the behavior of judges in U.S. state courts, regulation of the U.S. energy industry, and government programs in the U.S. healthcare system. This research statement is composed of five sections. In Section I, I introduce the motivation and the big picture of my research. In Section II, I summarize my research on U.S. state courts. In Section III, I summarize my research on the regulation of the U.S. energy industry. In Section IV, I describe my current research project on Medicaid. In Section V, I conclude.

I. Motivation and Big Picture

The fundamental motivation for my research originates from my observation of the economic development in my home country, South Korea. I grew up in South Korea from the early 1980s to the early 2000s. This period was marked with transitions: from a developing country with a dictatorship and rapid growth to a developed country with democracy, and then in the late 1990s a severe economic crisis erupted. Observing those twenty years of the Korean economy, the most notable and interesting feature to me was the large role of the government. In the early period of Korean economic development, Korea's dictatorial government was actively involved in mobilizing and allocating resources, actions often believed to have played a critical role in Korean economic development. However, the economic crisis of the 1990s revealed various significant distortions in the economy caused by government-directed resource allocation. This observation led me to have a strong belief that, for an economic system to prosper, we need to understand how to design the right incentives to ensure government officials legislate and implement good policies. In college, I studied economics with the aim of understanding what "good policy" means, and studied political science with the aim of understanding government institutions that shape public officials' preferences, incentives, and behavior. Since then, understanding the forces behind government officials' behavior and their influence on policy outcomes has been the main purpose of my research career.

I spent the early years of my research career conducting micro empirical analyses of institutions that structure the selection and incentives of government officials. I conducted a series of research focusing on U.S. state trial court judges. I chose U.S. states as my primary context because of the rich variation in institutions across geographic areas. I chose state trial court judges as my primary subject for three reasons. First, the institutional variation that exists for the selection and retention of state court judges (e.g., appointed vs. elected) also applies to many other public offices such as public utility regulators or school board superintendents. Second, state trial court judges make individual decisions, e.g., criminal sentencing, that can be directly measured. This helps us to avoid difficulties in inference that arise in analyzing aggregate outcomes from collective decisions, and helps us to focus on factors that influence individual decision-makers' incentives. Third, unlike many other contexts of government officials' decisions, the procedure for decision making undertaken by state trial court judges, as well as the nature and scope of their discretion, are quite homogenous across different places, and this makes possible comparability of measurement. Therefore, U.S. state trial courts serve as an ideal context for microanalyses of the influence of institutions on individual public officials' decisions. I conducted five studies, pursuing diversity both in determinants of individual judges' decisions and econometric approaches. They are summarized in Section II.

While conducting the above research, I also paved my second line of research, focusing on the interaction between political environments and regulated industries. It is motivated by the relative paucity of research at the intersection of political economy and industrial organization. The field of industrial organization has advanced significantly in understanding the welfare effects of various market structures and regulatory policies, but there has not been a large volume of empirical research on why non-optimal regulatory policies are made in the first place. The field of political economy has advanced significantly in terms of understanding how political forces cause distortions in monetary policy, taxation, and public good provision. However, the interaction between political forces and regulatory policies has been seriously understudied. I believe that this was to a large extent due to methodological barriers. The field of political economy has advanced primarily in theoretical modeling and reduced-form empirical analyses while the field of industrial organization has advanced primarily in structural econometrics. My goal is to establish systematic knowledge of government-industry interaction in large, regulated industries, building on the most recent advances in the two fields.

As a first step, I investigated the influence of regulator ideology on electric utility regulation, with Ali Yurukoglu, an IO economist at Stanford University. This first project focused on electricity *distribution*, which is uniformly regulated by state public utility commissions regardless of the individual states' choice of restructuring. While this paper has been well received, I also received many questions on the possible interaction between the political environments and deregulation of

the industry, a question not explored in the first paper. Thus, I conducted a companion project that explores deregulation and regulator ideology together. These studies are summarized in Section III.

Healthcare is another large industry that faces significant governmental regulations. The way that the government interacts with the healthcare industry is very different from the way it interacts with the energy industry, however, and this has created an opportunity to explore diverse modes of government-industry interaction. The government's most dominant role in the U.S. healthcare industry is through Medicare and Medicaid, which are direct provisions of insurance for elderly and indigent patients, respectively. I chose Medicaid as the context for my research. Unlike Medicare, designed and operated by the federal government, Medicaid is a federal-state joint program, for which the federal government sets up a general framework and the state governments have a broad range of discretion over the design of eligibility, reimbursement, and many other rules of program operation. Rich variation across states in the design and operation of the Medicaid program embedded in a large consistent framework set by the federal government renders an attractive context in which to explore how government programs interact with the industry. I explore determinants of Medicaid reimbursements. In my first study on Medicaid, I analyzed the Medicaid Disproportionate Share Hospital (“DSH”) program. In my second study on Medicaid, I explored the influence of state government ideology on geographic variation in Medicaid program design and operations, focusing on Medicaid expansion, transition to managed care, fee-for-service reimbursement rates, and expenditures. These studies are described in Section IV.

II. Preferences and Incentives of Public Officials: Evidence from U.S. State Courts

In the five papers on U.S. state courts, I investigated four factors that can affect preferences, incentives, and behavior of public officials: (1) the procedure for selection and retention of public officials (appointment vs. election; nonpartisan election vs. partisan election); (2) payoff from the office; (3) active media coverage, which increases voter access to information about political candidates and government decisions; and (4) officials’ political orientation and demographic background.

In the first paper, “**Preferences and Incentives of Appointed and Elected Public Officials: Evidence from State Trial Court Judges**” (*American Economic Review*, 2013), I compare how two selection systems, election and appointment, affect decision patterns of judges, using data from the state of Kansas, a state that has within-state variation in selection systems. The study yields three new findings: First, under appointment, policy congruence with voter preferences is attained by selecting judges with homogeneous preferences. In contrast, under election, judges face strong reelection incentives, while selection on preferences is weak. Second, the effectiveness of elections in

attaining policy congruence critically depends on payoffs from the job, which implies that the effectiveness of elections may vary substantially across public offices. Third, reelection incentives may discourage judges with significant human capital from holding office. This paper makes three key contributions. First, it provides a new result on differences in officials' behavior across selection systems. Second, it proposes a new empirical strategy that separately identifies public officials' preferences from their reelection incentives. Third, it provides a new insight on the interaction between payoffs from public office and the relative effectiveness of different selection and retention systems.

In the second paper, **“The Judge, The Politician, and The Press: Newspaper Coverage and Criminal Sentencing across Electoral Systems”** (*American Economic Journal: Applied Economics*, 2015), I and my collaborators, David Stromberg and James Snyder, study how newspaper coverage influences criminal sentencing decisions under different selection systems for judges. We find that newspaper coverage of courts substantially increases sentencing harshness, but only for judges selected through non-partisan elections, an electoral process in which candidates compete without party affiliation. This paper makes two key contributions. First, this is the first paper that studies the interaction between newspaper coverage and selection systems for public officials. Both media activity and electoral systems have been important subjects in political economy. However, the two have been investigated separately. Hence, the interaction between the two has been largely unknown, a notable deficiency in the literature now addressed by this study. Second, this is also the first paper to study media influence on low-level public officials. Many decisions that affect voters' everyday life are made by low-level public officials. And, it is not yet clear whether our knowledge of media influence on high-level public officials, such as Congressmen, can be extended, in a straightforward manner, to the case of low-level public officials. Citizens typically gather little information about low-level public officials. The media often do not provide information about low-level public officials. This paper finds a significant media influence in such low-information environments.

In the third paper, **“Media Influence on Courts: Evidence from Civil Case Adjudication”** (*American Law and Economics Review*, 2015), I investigate media influence on civil case outcomes. I find that the influence of judicial district's political ideology on civil case outcomes is mitigated in areas with active newspaper coverage. To my knowledge, this is the first paper to study media influence on civil case adjudication.

In the fourth paper, **“Elections and the Quality of Public Officials: Evidence from U.S. State Courts”**, (*Journal of Public Economics*, 2015), I and my collaborator, James Snyder, investigate the influence of electoral rules on voting behavior and the quality of judges, measured with bar association ratings, using data from 39 states. We find that listing party affiliation on the ballot suppresses the influence of candidate quality on election outcomes for judges. This is true even if

there is no systematic relationship between judges' party affiliation and decision patterns in criminal sentencing. This paper makes two key contributions. First, it empirically studies the role of candidate quality under different electoral systems, which had previously been difficult due to the unavailability of adequate measures of quality. Second, it provides concrete empirical evidence on the adverse effect of partisan elections of low-level public officials, while the theoretical literature has largely been focused on the advantages of providing electoral incentives to public officials.

In the fifth paper, “**Do Judges' Characteristics Matter? Ethnicity, Gender, and Partisanship in Texas State Trial Courts**” (*American Law and Economics Review*, 2016), I and my collaborators, Bernardo Silveira and James Snyder, investigate the influence of judges' political orientation and demographic characteristics on criminal sentencing decisions, using half a million cases from Texas state trial courts. Contrary to existing studies that document a salient influence of government officials' background on decision patterns, we find precisely estimated effects of judges' gender, ethnicity, and party affiliation that are near zero, conditional on geographic factors. At the same time, we find substantial heterogeneity in sentencing harshness across judges. We exploit a unique overlapping structure of Texas state trial courts, where different judicial districts partially overlap with one another, and document strong consistency in individual judges' sentencing behavior across different geographic areas.

This series of papers is distinct from previous studies in terms of economic insights, quality of the data, and strengths of empirical strategy. The determinants of public officials' behavior studied in this series have mostly been studied in isolation. My papers provide new insights by analyzing their interactions. Existing studies often relied on aggregate, proxy measures of public officials' behavior. My papers employ large-scale data sets with measures of individual decisions, with empirical strategies that get at details of mechanisms.

III. Political Environments and the Regulation of the Energy Industry in U.S. States

My second line of research deals with government-industry interactions. My first choice of context was the energy industry. The energy industry is an ideal context for several reasons. First, it is a highly concentrated industry, due to the large capital investment required for entry into the industry. This feature makes it one of the most heavily regulated industries. Second, electricity has a large impact on social welfare due to its importance to economic productivity as well as its environmental impacts. Third, many policies related to the energy industry are set at the state level, which makes it feasible and useful to investigate the relationship between state-level variation in political environments and the conduct of firms.

In my first study on the energy industry, “**Dynamic Natural Monopoly Regulation: Time Inconsistency, Moral Hazard, and Political Environments**”, forthcoming in the *Journal of Political Economy*, I and my collaborator Ali Yurukoglu study how regulator ideology interacts with time inconsistency and moral hazard in the regulation of electric utilities. Conservative regulator ideology significantly increases return on equity adjudicated for utilities. High return on equity leads to higher levels of investment in the electric distribution system and better reliability. At the same time, conservative regulator ideology increases operational inefficiency, measured by energy loss incurred by utilities. We specify and estimate a dynamic model that explains these empirical patterns. With estimates of the model, we conduct counterfactual experiments of various rules that mitigate inefficiencies due to time inconsistency and moral hazard.

This paper makes significant contributions to both political economy and industrial organization. It makes a substantive contribution by establishing novel welfare effects of regulatory ideology through its interaction with time inconsistency and moral hazard problems. It also makes a methodological contribution by incorporating a time inconsistency problem into a structural econometric framework in regulation. Although the time inconsistency problem has long been studied in macroeconomics, it has only been studied theoretically in the field of industrial organization due to computational difficulties in incorporating it into structural estimation. This has been a notable deficiency, which we resolve in this paper.

In my second study on the energy industry, “**U.S. Electric Utilities and Deregulation: Trends, States’ Choice, and Political Environments**”, under revision for the *Journal of Regulatory Economics*, I investigate the conduct of U.S. electric utilities for the past two decades to assess the relative influence of industry-wide trends, individual states’ choice of deregulation, and regulator ideology. This study provides a comprehensive investigation of five dimensions of utility conduct -- executive salary, investment, operation and maintenance expenses, reliability, and electricity prices. The literature on electricity deregulation has been primarily focused on the efficiency of generating plants, wholesale power markets, and retail competition. Research on the influence of deregulation on *utilities* has been relatively scarce. This study documents the significant changes in utility conduct associated with the wave of deregulation. The results also demonstrate that individual states’ political environments, specifically the ideological makeup of the state public utility commissions, had a much greater impact on utility conduct than the states’ decision to deregulate.

These two studies together demonstrate the importance of political environments to industry regulation. Given the importance of the energy industry and that a large number of regulations are designed and implemented by state governments, I believe that my research has the potential to spur a new, important research stream.

IV. The Political Economy of Medicaid Design and Operations

As mentioned in Section I, I chose U.S. healthcare, in particular Medicaid, as the second context in which to explore government-industry interactions. Variation in the design and operations of Medicaid can largely be divided into three dimensions: eligibility, reimbursement rates, and delivery systems.

In my first study on Medicaid, “What is Behind the Size Effect? The Role of Large Hospitals in the Medicaid DSH Program”, I explored determinants of Medicaid reimbursements, focusing on disproportionate share hospital (“DSH”) payments, and documented advantages that large government hospitals in urban areas receive from government distribution of Medicaid DSH payments. The key findings are consistent with a scenario in which the government aims to counterbalance disparities in hospitals’ ability to cross-subsidize indigent patients, following the logic that hospitals who treat patients with more lucrative private insurance have greater profits and therefore can subsidize the indigent.

In my second study on Medicaid, “The Political Economy of Medicaid: Ideology, Eligibility, and the Consequences of Cost-Saving Measures”, I examined to what extent the partisan composition of the state governments influenced geographic variation in Medicaid program design and operations over a 15-year period from the mid-1990s to 2010, the time of Medicaid expansion due to the legislation of the Children’s Health Insurance Program (CHIP). I focused on the long-run tradeoff between the breadth of eligibility and the stringency of payment rates. First, I find that the Democratic seat share in the state legislatures has been a driving force behind Medicaid eligibility expansion, especially in the relatively later stage. Second, liberal states adopted cost-saving measures aggressively along with eligibility expansion. Both the eligibility expansion and the political force behind it are strong predictors of the reduction of Medicaid fee-for-service reimbursement rates over time. The eligibility expansion also played an important role in the switch to the managed care in a subset of the states. Finally, we find that the Medicaid per-enrollee spending increased steadily despite the two cost-saving measures that accompanied the eligibility expansion, i.e., the reduction of fee-for-service reimbursement rates and the switch to the managed care. These unintended consequences are primarily due to the concurring regulation of the private insurance managed care, which increased the utilization of health care services, and its spillover effect on the Medicaid program.

V. Conclusion

The government plays an important role in resource allocation in many economies. Thus, it is of significant importance for economists to understand the forces that shape government officials’ behavior and governmental interaction with large industries. My research spans two distinct but related areas: (1) selection and incentives of public officials; and (2) interaction between

governments and large, heavily regulated industries. The key features of political environments studied in the first line of research – selection rules, payoffs, and media – are primary factors that shape government officials’ behavior in any stable democracy. Thus, the outcomes of my research have broad implications for decision-making in governments in general. My second line of research is on the industries that are at the center of many public policy debates. Research on government-industry interactions in these areas can have far-reaching impacts on understanding the prevalence of non-optimal policies and potential institutional solutions to address them.

In the near future, I plan to conduct more research on the variation of Medicaid spending. Medicaid is the single largest state budget item, typically constituting 25-35% of the state budget. Conceptually, the spending variation in the Medicaid program can be decomposed to four factors – the distribution of the enrolled population, benefit coverage, payment rates for the given coverage, and delivery systems. Assessing the relative role of each of these elements and understanding how their relative importance varies as a function of structural changes in the Medicaid program is a research agenda I am currently pursuing.