‘ESCAPE FROM PATRONAGE’: A MULTI-METHOD EXPLORATION OF
THE CAUSES AND CONSEQUENCES OF BUREAUCRATIC INSULATION

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Date of Defense: 07/13/2020
For Jill, who has sacrificially given to our marriage

&

Christo et Regno Ejus
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Bureaucratic insulation allows government agents to implement general welfare policies rather than be subject to the influences of clientelism, patronage machines, and personalistic/populist elites. Insulated bureaucracies can develop professionalized personnel and norms, directly increasing agents’ ability to affect policy issues through expertise.

To explain the origins of bureaucratic autonomy, I hypothesize that varying levels of political competition, together with whether a state is federal or unitary, affects the likelihood that regimes will develop insulated agencies. I compare the institutional arrangements of states with only a unitary sovereign central government to those where sovereignty is split between subnational and national governments to understand what may hinder or help the emergence of insulated agencies. Using a novel game theoretic approach, I show that political parties facing an expected loss of governing power are more likely to insulate the bureaucracy if the bureaucracy can mitigate against some of those losses. These losing parties are willing to give up even more of their contemporary political power the greater the benefit of insulated bureaucracy. By introducing federalism as a network of provincial political competitions, I show several mechanisms that may create "holdout" situations either for or against bureaucratic insulation.

Applying the game theoretic findings to a 172-country, 38-year panel dataset, I find evidence that higher levels of political competition lead to higher levels of insulation and that federal states are more likely to have higher levels of insulation than unitary states, both independently increasing the likelihood of higher insulation.

Finally, I look at five organizational and policy outcome variables, finding a significant
relationship between insulation and three of the variables: policymaker consultation with CSOs, public administration impartiality, and public good provision. These are the most important as they directly affect citizen perception of fairness, equity, and voice within state decision-making.

Regina Smyth, Chair

Claudia N. Avellaneda

William Bianco

Sean Nicholson-Crotty
TABLE OF CONTENTS

Acknowledgements .............................................. v

Abstract ............................................................ vi

List of Tables ....................................................... xii

List of Figures ...................................................... xiv

Chapter 1: Introduction and Background ......................... 1
  1.1 The Question ................................................. 1
    1.1.1 Bureaucratic Insulation ............................... 2
    1.1.2 Role of Federalism ..................................... 6
    1.1.3 Role of Political Competition ......................... 8
  1.2 The Interaction of Political Competition and Federalism .... 9
  1.3 Three Main Papers .......................................... 12
    1.3.1 Federalism, Party Competition, and Bureaucratic Insulation: Pockets of Excellence, Laboratories of Democracy, or Structural Veto Players? .............. 12
    1.3.2 Mechanisms of Merit: A Comparative Investigation of the Causes of Increased Bureaucratic Insulation .................................................. 16
    1.3.3 The Consequences of Bureaucratic Insulation for Public Organizations and Policy Outcomes ......................................................... 19
  1.4 Discussion & Implications: Why Bureaucratic Insulation? .... 22
**Chapter 2: Federalism, Party Competition, and Bureaucratic Insulation: Pockets of Excellence or Strategic Hold-out?**  

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Introduction</td>
<td>24</td>
</tr>
<tr>
<td>2.2 Why Network Formation Games?</td>
<td>27</td>
</tr>
<tr>
<td>2.3 The Network</td>
<td>29</td>
</tr>
<tr>
<td>2.3.1 Nodes</td>
<td>29</td>
</tr>
<tr>
<td>2.3.2 Arcs</td>
<td>30</td>
</tr>
<tr>
<td>2.3.3 Network Structure</td>
<td>30</td>
</tr>
<tr>
<td>2.3.4 Preferences and Payoffs</td>
<td>30</td>
</tr>
<tr>
<td>2.3.5 Rules and Strategic Behavior</td>
<td>32</td>
</tr>
<tr>
<td>2.3.6 Stability</td>
<td>35</td>
</tr>
<tr>
<td>2.4 The Unitary State</td>
<td>36</td>
</tr>
<tr>
<td>2.4.1 One-Party System</td>
<td>36</td>
</tr>
<tr>
<td>2.4.2 Multi-Party Systems</td>
<td>40</td>
</tr>
<tr>
<td>2.5 The Federalist State</td>
<td>46</td>
</tr>
<tr>
<td>2.5.1 Identification</td>
<td>46</td>
</tr>
<tr>
<td>2.5.2 Federalism as Intra-Party Competition</td>
<td>49</td>
</tr>
<tr>
<td>2.5.3 Federalism as Single-Level Inter-Province Competition</td>
<td>53</td>
</tr>
<tr>
<td>2.5.4 Federalism as Dual-Level Inter-Party Competition</td>
<td>55</td>
</tr>
<tr>
<td>2.5.5 Unitary vs. Federalism</td>
<td>57</td>
</tr>
<tr>
<td>2.6 Conclusion</td>
<td>58</td>
</tr>
</tbody>
</table>

**Chapter 3: Mechanisms of Merit: A Comparative Investigation of the Causes of Increased Bureaucratic Insulation**  

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Introduction</td>
<td>62</td>
</tr>
<tr>
<td>3.2 Literature Review</td>
<td>64</td>
</tr>
</tbody>
</table>
Chapter 4: The Consequences of Bureaucratic Insulation For Public Organizations and Policy Outcomes

4.1 Introduction

4.2 Theory & Methods

4.2.1 Theoretical Model and Underpinnings

4.2.2 Response Variables

4.2.3 Explanatory Variables

4.2.4 Alternative Hypotheses

4.2.5 Control Variables

4.2.6 Fixed-Effects Model

4.3 Results

4.4 Conclusions & Implications

Chapter 5: Conclusion

Appendix A Probabilistic NFG estimation

Appendix B Table of Variables and Summary Statistics in Chapter 3

Appendix C Table of Variables and Summary Statistics in Chapter 4
# LIST OF TABLES

1.1 Basic Theoretical Overview .............................................. 11

2.1 Basic Theoretical Overview .............................................. 26
2.2 All One Party Networks .................................................. 37
2.3 Payoffs for All One-Party Networks .................................... 38
2.4 Restricted Two-Party Networks .......................................... 41
2.5 Payoffs for Restricted Feasible Two-Party Networks ................. 43
2.6 Restricted Three-Party Networks ........................................ 44
2.7 Payoffs for Restricted Three-Party Networks ............................ 46
2.8 Revised Theoretical Overview ............................................. 59

3.1 Likelihood of Extensive Bureaucratic Insulation at the National Level ............ 67
3.2 Simplified Outcomes Table for Immediate Empirical Testing ..................... 68
3.3 Cross-Sectional Time Series Individual Contingency Tables ..................... 76
3.4 Cross-Sectional Time Series Interaction Contingency Tables ..................... 78
3.5 Cross-Sectional Time Series Ordered Logit Model ............................ 81
3.6 Potential Outcomes Analysis ................................................. 84

A.1 Restricted Four Party Networks ......................................... 124
A.2 Payoffs for Restricted Four Party Networks ................................ 125
A.3 Argentine Provinces and Simulated Network Structure ........................ 126
E.1 Oblique Factor Loading ................................................... 134
# LIST OF FIGURES

1.1 Macro-theoretical Causal Diagram .................................................. 18
1.2 Bureaucratic Outcome Causal Diagram ............................................. 20
1.3 rGDP Change versus Government Effectiveness ................................. 23

2.1 All One-Party Networks ............................................................... 37
2.2 Contour plot of relationship between $\theta$, $E[k]$, and $\beta$ .................. 39
2.3 Two-Party Networks .................................................................. 42
2.4 Three Party Networks ............................................................... 45
2.5 The Argentine Case ................................................................ 48
2.6 Intra-Party Networks in the Argentina Simulation ............................ 51
2.7 Simulated Inter-Province Competition in Argentina .......................... 54

3.1 Bureaucratic Appointment Criteria Worldwide, 2016 ........................ 71
3.2 Lower House Winning Seat Margin Worldwide, 2016 ....................... 72
3.3 Watts 2003 Federal Classification Worldwide .................................. 73
3.4 Mosaic Plot of BAC, Political Competition, and Federal Regime ........ 79
3.5 Mosaic Plot of BAC, Party Status, and Federal Regime ..................... 80

4.1 Particularistic vs Public Good Provision Worldwide, 2017 ................ 89
4.2 Degree of Public Administration Impartiality in Decision-making Worldwide, 2017 .......................... 91
4.3 Theoretical Variable Causal Diagram ............................................. 93
4.4 Bureaucratic Salaried Worldwide, 2017 ................................. 94
4.5 CSO Consultation Worldwide, 2017 ................................. 96
4.6 Bureaucratic Appointment Criteria Worldwide, 2017 .................. 99
4.7 Response Variable- Bureaucratic Salaried ............................... 107
4.8 Response Variable- CSO Consultation ................................. 108
4.9 Response Variable- Public Administration Impartiality ............... 110
4.10 Response Variable- Particularistic vs Public Good Provision ........ 111
4.11 Response Variable- Government Fiscal Standing ....................... 113

E.1 Scree Plot of Electoral Factors ................................. 133
CHAPTER 1
INTRODUCTION AND BACKGROUND

1.1 The Question

How are some states able to function as liberal democracies, protecting and providing for their citizenry, even though they lack the economic resources found in advanced industrialized countries? This work builds upon the democratization and state development literatures that identify the integral role for public bureaucracies in democratic governance. Bureaucracies provide the capacity to ensure the rule of law, control of corruption, regulatory quality, and government efficiency. In other words, a democratic political system is only as effective and efficient as its bureaucracy.

My dissertation explores the conditions that give rise to public bureaucracies that support democratic governance in the context of the modern welfare state in non-OECD countries. In particular, I ask: what leads to the rise of bureaucratic insulation? Bureaucratic insulation allows government agents to implement general welfare policies rather than be subject to the influences of clientelism, patronage machines, and personalistic/populist elites. Insulated bureaucracies have the ability to develop professionalized personnel and norms, directly increasing agents’ ability to affect complex policy issues through expertise.

To explain the origins of bureaucratic insulation, I hypothesize that varying levels of political competition, together with whether a state is federal or unitary, affect the likelihood that regimes will develop insulated agencies. I compare the institutional arrangements of states with only a unitary sovereign central government to those where sovereignty is split between subnational and national governments to understand what may hinder or help the emergence of insulated agencies.

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1 There are many schools of thought concerning both the positive and normative assessment of corruption, clientelism, and personalistic politics in general; for an overview from a political economy perspective, see Aidt (2003).

2 This is not to argue that autonomy through insulation is sufficient for good policy outcomes; most scholars of public administration agree that both competence (via autonomy) and responsiveness are important for quality outcomes (Meier & Bohte 2007). There can be a point where too much insulation hampers effective policy by excessively insulating agencies from political processes. However, my work is focused on the early stages of granting insulation to agencies as a necessary condition for their development into competent and responsive agencies.
Similarly, the political party system in a state is also a structure through which strategic actors, particularly the party elite, determine when and how governments are willing to give up power in the short term for long-term goals. Both institutions, party systems and federalism, are the product of choices made by political actors to maximize either personal or programmatic utility. Thus, when it comes to decisions about the institutional framework of the bureaucracy, the same underlying incentives, as well as the induced incentives from federalism and the party system, interact to contribute towards or against bureaucratic insulation.

Though most research into bureaucratic foundations are focused on the US and Western Europe, I incorporate less developed countries (LDCs) into my research for several reasons. First, the state apparatus does not precede the possibility of democratic governance by a particularly large margin, unlike in Western Europe, where the bureaucracy initially was an extension of monarchical/feudal rule (Tilly 1992). Second, LDCs make up the vast majority of contemporary states, allowing for more cases to be examined (King, Keohane & Verba 1994). LDCs provide greater variance in political environments, levels of development, and the level of bureaucratic insulation; this allows for stronger analysis of comparative variables. Third, not only are there more LDCs, but the marginal gains from understanding and potentially improving political and bureaucratic interactions are much higher for these countries than in highly developed states.

Going forward, I first define and review the key elements of my theory on the emergence of bureaucratic insulation: what is bureaucratic insulation and why might it emerge? What is federalism and how does it affect the political system (compared to unitary states)? How does political competition impact political institutions and the policy process? Second, I outline the three primary analytical papers that address the intersection of competition, federalism, and bureaucratic insulation as well as insulation’s effect on bureaucratic outcomes. Third, I provide my motivation for this research, a justification for the placement of the research in the broader literature, and areas for future study.

1.1.1 Bureaucratic Insulation

Bureaucratic insulation is the loosening or lack of political influence by elected officials over government organizations, within the constraints of a broader political system. This does not mean that these government organizations are able to do whatever they so choose without constraint.
As Carpenter (2001a) notes, unlimited autonomy is due only to deities, not human or organizational actors. In fact, the constraints on government bureaucracies may in fact be their defining characteristics (Wilson 1989). Nevertheless, insulation does mean that these constraints are not so overwhelming as to preclude choice by bureaucratic agents, even sometimes against the will of other political actors (McCubbins, Noll & Weingast 1989, Meier & Bohle 2007).

In contemporary literature (Carpenter 2000, Carpenter 2001a), two primary factors lead to bureaucratic autonomy: the development of capacity within an organization, and the inculcation of legitimacy from outside the organization. Capacity is developed through the hiring and training of employees, the adoption of an organizational culture based on the mission and technology of the organization, and through the strategic adoption of policy and organizational innovations (Wilson 1989). Legitimacy is garnered through the development of reputation, the creation of networks (Carpenter 2001a) or unique constituencies (Wilson 1989, Meier & Bohle 2007), and the adoption of practices seen as legitimate by other political actors (Dimaggio & Powell 1983).

However, both of these factors, capacity and legitimacy, first require the formation of an organization and the devolution of some minimum amount of political power to that organization. Carpenter (2001a)’s study of three government agencies begins after the Pendleton and Interstate Commerce Acts and several years of Progressive politics in the US. My research begins to uncover the circumstances under which legislation, such as the Pendleton and Interstate Commerce Acts, is adopted which allows for bureaucratic insulation to begin to develop.

Much of the political economy literature focuses on insulation and meritocracy as a means of getting the government to credibly commit to its policies for economic growth (Fernandez-Albertos 2015, Nistotskaya & Cingolani 2016). This literature concentrates on the causes of central bank independence (CBI) whether it is influenced by political business cycles (Alpanda & Honig 2009, Maloney, Pickering & Hadri 2003) and/or the level of political liberty and stability in a state (Bagheri & Habibi 1998). The focus on central banks makes sense because their actions and outcomes are readily identifiable and because their political and economic influence dramatically outsizes the number of employees or the government spend. However, while this vast literature has advanced our understanding of CBI, it has not tested its findings on the vast majority of

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3 Also known as the Pendleton Civil Service Reform Act of 1883 and the Interstate Commerce Act of 1887.
bureaucratic institutions.

In contrast, public administration literature focuses on insulation as a valuable first step towards autonomy, which brings professionalization and responsiveness (Carpenter 2001a, Carpenter 2001b). Insulation does not guarantee cohesion will happen (Carpenter 2001a, Meier & Bohte 2007, Masciandaro, Quintyn & Taylor 2008), but institutions that insulate the bureaucracy offer a means of political commitment to reward competence and professionalization (Mueller 2015). Successful management of resources with sustained societal support enhance and maintain the autonomy of bureaucratic agents, creating a virtuous cycle of insulation-good management-discretion (Goodman 1991).

My work, presented in these three papers argue that political actors only create insulated bureaucracies when it is in their strategic self-interest within formal political institutions. There are three primary arguments for this voluntary transfer of power:

First, political parties may employ some level of transactions cost reasoning. At some point, even the most clientelistic of governments needs to accomplish noticeable tasks and merely having the structures in place and filling those positions through nepotism fails to accomplish the given tasks. Alternatively, there may be some services provided by the government within which a critical mass of the individuals has at least some minor sense of noblesse oblige (e.g. doctors). Either way, the elites have two options: closely administer these tasks themselves or delegate the tasks. Choosing the former means the dedication of time and energy, which may come at the expense of other tasks meant to increase the power of the party. Choosing the latter invokes the principal agent problem, meaning that the party elites must devolve enough political power down to the agency to achieve the task, but also risk bureaucratic agents using that power for something other than what the elites intended (including doing nothing). Thus, as Epstein & O’Halloran (1999) and Huber & Shipan (2002) put it, political elites face a similar position as private firms as to whether to make or buy a product; the product in this case being a policy. Most importantly for our purposes, before the parties have the opportunity to buy a particular policy from the bureaucracy, they must first buy some level of competence in the bureaucracy, lest they doom themselves to always purchasing lemons, i.e. inefficient and ineffective policy outcomes.

Second, if political parties are going to give up some of their power to buy a bureaucracy and

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4This literature is not entirely absent from the CBI literature; see Jeong, Miller & Sobel (2009).
public policies, they at least gain the right to complain about it and blame the bureaucracy for mistakes. In the language of Fiorina (1989), political officials may desire to take advantage of constituency services. Offered as an explanation for Mayhew (1974)’s vanishing marginals in the U.S. Congress, Fiorina points to the ability of incumbents to use constituency services to their advantage. This not only includes items such as the ability to use the U.S. printing services, but also for the incumbents to inquire into the workings of the bureaucracy for their constituents. Representatives can have their staff contact the Social Security Administration concerning the application of one of their constituents for Disability Insurance. Since the SSA’s administrative funding is contingent on Congress, Fiorina contends that these inquiries receive more immediate attention than the system would otherwise predispose. Similarly, the FCC was unaware of the controversial nature of the Used Car Rule or the Funeral Industry Practice Rule until used-car salesmen and undertakers began to contact their Congresspersons, who were then able to pressure the FCC to back down on their administrative proposal (see Wilson (1989), pages 82-83).

In both of these cases, the reputation gains of the politicians are contingent on a) the somewhat clear distinction between the representative’s and the bureaucracy’s policy position, and b) that the elected official would be able to exert power over the bureaucracy, whether to force the agency to provide a service or reverse an administrative law/policy. If the first contingency does not exist, constituents who vote economically will logically tie “what the government does” with “what the bureaucracy does,” even if the party had nothing to do with the outcome. Thus, it is in the interest of the government to create a bureaucratic scapegoat for policy outputs and outcomes, less the opposing political parties gain vote share and take over the government.\(^5\)

Third, and the primary approach used in these articles, political elites may be engaging in a process that can be modeled as a political rational expectations approach (Alt & Lassen 2006). This case is the most dependent on multiple parties capable forming a government based on a future election.\(^6\) Here, the incumbent party knows that with some high likelihood, they will be a

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\(^5\)The dominant paradigm for discussing when the second contingency (control over the bureaucracy) is the principal-agent model (McCubbins, Noll & Weingast 1987, Calvert, McCubbins & Weingast 1989, McCubbins, Noll & Weingast 1989, Eggertsson & Le Borgne 2010). In this literature, structure and process in the formation of agencies are an agreement between three potentially rival controlling interests: the legislature, the executive, and the judiciary. Each of these actors must form a coalition that, rather than determine specific outcomes, attempts to determine the incentives/interests of the bureaucratic actors they are putting into place (and limits the incentives of ex post political actor meddling).

\(^6\)This is also contingent on having consolidated and programmatic parties with clear platforms competing,
minority/opposition party in the government, they will forgo the use of some of their contemporary political power to form an (semi-) insulated bureaucracy. By forming different agencies and imbuing them with political power, the incumbent government can also instill in these agencies a particular mission and culture which, once established, is difficult to change course (McCubbins, Noll & Weingast 1987, Wilson 1989). The idea is to put the following governments into something of a policy straitjacket (Moe 1989, Moe 1995). Even if allocating political power to an agency does not tie the hands of future governments, it will at least force those coalitions to spend noticeable amounts of political capital to restructure or restrain the bureaucracy.

Which policy arenas are delegated to the bureaucracy is up for debate: incumbents may decide to hand over the reins on policy areas in which they have no strong preference, but they know the opposition has more at stake. Alternatively, the government may wish to relinquish control of public policies for which they have a strong preference in order to mitigate the changes future governments wrought on their area of interest.

In these papers, I examine the effect that the differences between federalism and unitary states (political institutions), as well as political party competition (strategic actors), have on the development of bureaucratic insulation. AS discussed below, federalism can have strong lasting effects on the nature of the party system, because of the incentives faced by party actors at different levels. It also conditions the grand bargain between disparate political entities at the national level. Within these constitutional level structures, the rational expectations of political actors reacting to electoral risk then provides clear hypotheses for the potential formation of an insulated bureaucracy as a novel institutional actor.

1.1.2 Role of Federalism

From a formal institutions perspective (Riker 1964), a state, or more particularly, a constitution, is federalist if (a) at least two levels of government have overlapping jurisdiction over the same geographical area, (b) each level of government maintains some legal insulated action in at least one policy arena, and (c) the constitution and legal system help maintain these separate spheres. Riker (1964) then argues that the informal rules and norms, as well as the strategic interactions of political actors, shift the balance of power sharing amongst the national and subnational governments. He as otherwise electoral uncertainty is not associated with policy (Kitschelt & Smyth 2002, Smyth 2006).
further argues that the reason federalist states and states with large land area coincide is the fact that federalism is the only alternative to empire when it comes to governing large land masses with diverse groups of people. Thus, while there are still valid concerns regarding the comparison of large and small states, it is reasonable to assume that some of these differences have already been captured in the choice of political institution, and thus still lend themselves to comparative political analysis.

My argument rests on the tension between vertical and horizontal integration of parties (Cabeza, Gómez & Alonso 2016, Borges, Albala & Burtnik 2017). Riker (1964) suggests that the number of vertically integrated parties has a strong effect on the ability for a federal system to not stray towards confederation or unitary political structures. Rodden (2006) argues that if national parties can discipline their subnational units, it is easier for the central government to implement a coherent, unified policy agenda (see also Bertelli & John (2010)). However, he notes that often this discipline must come in the form of bargaining with the subnational units (as they have sovereignty, a key difference from the fiscal and administrative decentralization literature) and in order to entice subnational units to sign on to the coherent national agenda, the expected ensuing electoral benefits from this increased collective welfare must be palatable. Thus, a vertically integrated party that faces competition at the subnational level must be competent in collective welfare delivery and thus value a neutrally competent national bureaucracy to implement said agenda. Moreover, subnational units that have already implemented programmatic policy platforms gain further leverage against their potentially nepotic national counterparts in this bargaining process.

Chhibber & Kollman (2004) are among the first to study the link between federalism and national party structures. Voters attempts to influence policy decision-making (more so than policy implementation) means that they will organize at whichever level of politics will give them the most leverage. They argue that as authority becomes, or at least appears to become, more centralized, voters are incentivized to form and support national parties to address the issues that are relevant to them. Conversely, if there is a movement towards decentralization, voters will move from a national party system to one controlled by provincial parties. Filippov, Ordeshook & Shvetsova (2004) take this a step further by asserting that party systems are the mechanism through which federalism can become self-sustaining, as they, coupled with constitutional structures, provide the institutions necessary for self-interested parties to maintain stability, rather than allowing political
conflicts at lower levels of negation to overwhelm the process.\footnote{Besides spatial federalism, there is also the literature on fiscal federalism, in which taxes are collected primarily (though not necessarily exclusively) at the national level, and the revenues from the taxes are then devolved back down to the subnational units to compensate their lack of taxation power. While this may create a simplified tax scheme, it creates a moral hazard issue for the subnational units, particularly in countries where the national and subnational constitutions do not place budget limits on the government (Tresch 2014). Without these constitutional limits, the subnational government is able to practice a soft budget cap, where expenditures do not have to meet tax revenues, but instead are only somewhat constrained by the amount of money the subnational government can request of the national government (Jones, Meloni & Tommasi 2012). This request, in turn, is based on the budgetary size of the subnational unit, their contribution to the tax side of the equation, their political alignment with the national government, and the salience of spending issues both within the subnational unit and at the national level (Peterson 1995, Wibbels 2005).}

Wibbels (2005) presents a thorough overview of the potential strengths and weaknesses of a federalist system. From his overview, I suggest there are seven factors of federalism that affect policy outcomes: First, federal states have the ability to react to local politics (cross-cutting cleavages) while providing the scale necessary for public goods (Tiebout 1956). Second, local (subnational) governments can provide a check on federal government encroachment into citizen’s lives. Third, federal governments provide a mechanism through which the government has higher levels of contact with the electorate and thus can be disciplined more easily (Peterson 1995, Weingast 1995). Fourth, the structure of the federal system affects the formation of national party systems (Chhibber & Kollman 2004). Fifth, besides the issues mentioned concerning fiscal federalism, federalist systems face issues of policy congruence/coordination at the different levels of government, which leads to the sixth and seventh issues, the misalignment of incentives at multiple levels and the greater barriers to collective action problems (Wibbels 2005).

1.1.3 Role of Political Competition

Political competition plays a crucial role in the development of both democracies and bureaucratic development. First, political competition forces parties to act strategically with regards to both the electorate and opposing parties (Kitschelt & Wilkinson 2007, Hellwig 2012). For example, Murillo (2009) finds that political parties in Argentina, Chile, and Mexico, in order to insulate themselves from competition, adopted different strategies during the Washington Consensus Era when it came to the privatization of public utilities (telecom and electricity), depending on the alternatives opposition parties presented to voters. Second, without political competition, parties have greater incentive to focus on core constituents and the provision of resources to the sele-
torate, the elites from whom the political leadership is chosen and also the group that makes that decision (Helmke & Levitsky 2006, Haggard & Kaufman 2008). Third, competition creates a mechanism through which policies are refined to represent local political actors, institutions, and culture (Lijphart 1977, Lijphart 2012). Fourth, competitive political systems induce greater voter turnout, which in turn may force political parties to adopt more liberal policy outcomes (Holbrook & Vandunk 1993). Fifth, democratic competition keeps political elites from “taking their ball and going home;” for example, using the military to threaten populist elites into particular actions or to enforce informal power sharing, or to expropriate resources when facing electoral loss (Przeworski 2010).

For my dissertation, I define a particular type of political competition, electoral risk, as the likelihood that the current governing coalition loses its governing status in the next election. As Przeworski notes in O’Donnell, Schmitter & Whitehead (1986), participants’ strategies and institutional structures do not lead to pre-ordained outcomes. They are in fact inherently uncertain, and thus provide incentives for the political actors to mitigate their uncertainty using the rules of the game. At low or high levels of risk, elected officials and parties are less likely to be responsive to both the electorate and other challenging parties because a response is unlikely to change the outcome. Thus, political competition is likely to exact institutional or policy change when a response by the government may affect the outcome of an election (moderate levels of risk, see De Figueiredo (2002)).

1.2 The Interaction of Political Competition and Federalism

Wibbels (2005) argues that federalist states are less likely to lead to market reform because of the burden placed on multiple levels of government concerning taxation and spending. This then allows subnational political actors to ignore or even work against the efforts of national-level political actors when it comes to market reform, while these regional governments have limited ability to affect macroeconomic policy change. These factors can be mitigated by the second dimension, partisan

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8Nooruddin & Simmons (2015) argue that this expanded voter turnout and greater probability of liberal policy outcomes forces the Indian government to give autonomy to agencies to carry out these policies. This is entirely consistent with one of the arguments for the development of autonomy presented below.

9This is a slightly generalized version of Kayser & Lindstadt (2015), who focus on parliaments in advanced democracies.
harmony or discipline, which is to say that political parties control the actions of their members at both the national and subnational levels (Riker 1964). This control makes it easier to develop, propose, and implement coherent policies at all levels of the government.

Thus, a federal system in which the party elites at the national level fail to coordinate with, cooperate with, or control subnational party actors is the least likely to experience macroeconomic reform (and the most likely to experience large macroeconomic political shocks). Unitary states that lack party cohesion and/or political party competition, can arguably be considered low harmony situations, where enacting market reforms is hindered not by formal institutional barriers, but by strategic interactions within the government; therefore, unitary systems with higher levels of control/harmony are likely to experience better macroeconomic performance. Finally, while Wibbels would be hesitant to use such labels, he does note that many political scientists have found federalism in advanced democratic states (read, states that have solved the fiscal federalism problem through high levels of partisan harmony) to be “market-preserving” (Weingast 1995) for a plethora of reasons (see the section on federalism) and would therefore characterize federal states with high levels of partisan harmony as superior to equivalent unitary states.

It is important to note that while market reform and macroeconomic performance are important aspects of political and economic development, the literature rarely looks at these outcome variables as changes in political institutions; instead, they are changes in public policy. Changing policy without changing underlying institutions results in sub-optimal development (Rodrik 2000, Rodrik 2007). Determining which institutions to change (Rodrik 2008), how best to change them (Acemoglu, Aghion & Zilibotti 2006), and to achieve sustained institutional reform is in no way easier (Geddes 1994), but rather a prerequisite for lasting economic growth (Knack & Keefer 1995).

Similar to Wibbels (2005), I focus on federalism and party structure, but instead focus on their roles in determining the emergence of bureaucratic insulation (see Table 1.1). Also, I take a step back from partisan harmony and concentrate on the existence of party competition, without which partisan harmony may not matter. In this case, a federalist state with low levels of competition is more likely to have some level of bureaucratic insulation, as the federalist structure allows different states to create insulated local bureaucracies or to offer subnational sovereign support for national bureaucracies, leading to “pockets of excellence” (Geddes 1994, Whitford 2002), whereas in a unitary state with similarly low levels of competition, there are fewer loopholes through which
to form bureaucratic insulation; thus the unitary state has the lowest likelihood of developing an insulated bureaucracy.

On the other hand, high levels of political competition in a unitary state make it more likely to see extensive bureaucratic insulation, whereas the same structures that allowed non-competitive federalist states to create pockets of excellence also allow highly competitive states to possess regional hold-outs for spoils-based bureaucratic structures, since high levels of competition would have to exist in each state in order for subnational political elites to adhere to national policy levels. The U.S. is a perfect example, where many states that have uncompetitive elections (whether Democrat or Republican) are more likely to exhibit machine politics/partisan tendencies in the bureaucracy, while the national government has granted much higher levels of insulation to the federal bureaucracies (Ringquist 1993). Hence, unitary states represent both extremes of bureaucratic insulation, depending on the level of competition within the party system.

Table 1.1: Basic Theoretical Overview

<table>
<thead>
<tr>
<th>Level of Party Competition</th>
<th>Type of Institution</th>
<th>Outcome: Likelihood of Extensive Bureaucratic Insulation at the National Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Competition</td>
<td>Federal State</td>
<td>Unlikely</td>
</tr>
<tr>
<td>High Competition</td>
<td>Unitary State</td>
<td>Most Unlikely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Likely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Most Likely</td>
</tr>
</tbody>
</table>

To briefly summarize my main argument, the federal or unitary nature of a state, coupled with the level of political party competition, affects the likelihood of that state developing insulated public bureaucracies. A single subnational government in a federalist system can exhibit dramatic political differences from the other subnational governments or the national government. This means that a country that lacks broad political competition, there may be subnational competition in one state that may lead to the creation of insulated subnational state bureaucracies. However, it also means that in a system with broad party competition, some subnational governments may lack competition and thus prevent or hinder the formation of insulated agencies. Unitary states represent more of an “all or nothing” approach to bureaucratic insulation. In this research, political party competition forces political actors to be forward-looking and develop insulated bureaucratic agencies as a solution to long-term competition. Finally, these insulated bureaucracies are then able to improve governance and policy implementation in these states across several measures.
1.3 Three Main Papers

Why the Three Paper Approach?

The three paper approach allows researchers to address several related substantive questions within a larger research question framework (Geddes 2003) without rigidly requiring those questions to abut one another as in a traditional social science dissertation. This process promotes mezzo level theory-building rather than trying to achieve a potentially unachievable generalized theory (Perry 1989). Methodologically, this approach allows some flexibility in allowing each article to adjust based on available methods and data. Finally, if the results are consistent, it provides a strong test, and if they are not, they will help illuminate remaining questions.

1.3.1 Federalism, Party Competition, and Bureaucratic Insulation: Pockets of Excellence, Laboratories of Democracy, or Structural Veto Players?

Introduction

My study develops a formal theoretic model to explain this variation in bureaucratic institutions. Building on Barbara Geddes’ pioneering work (Geddes 1991, Geddes 1994), I hypothesize that political elites grant insulation to the bureaucracy in order to minimize uncertainty (or minimize flexibility or constraint—if the bureaucracy is populated by political animals hard to change direction with a change in government, hard to build expertise) in politically competitive environments. Initial insulation typically takes the form of meritocratic control over hiring and firing within government bureaus. Given this insulation, bureaucratic agents begin to develop the potential for political legitimacy and expert capacity, which further increases levels of insulation from political actors. In this paper, I focus on the transfer of power between elites and the bureaucracy.

The paper’s essential premise is that in a political system where multiple parties have a reasonable chance of forming a government,\textsuperscript{10} at some point, the party in power will see fit to change the role of the public bureaucracy from a particularistic patronage machine, i.e. the spoils system where positions are handed out in exchange for votes or broader loyalty, to a programmatic con-

\textsuperscript{10}Of course, once inserted into the game environment, these parties could in fact be factions within an authoritarian regime (e.g. the military, secret policy, financial backers). As Przeworski (2010) notes, however, these rotations in the ability to govern are rarely self-enforcing equilibria as we find in consolidated democracies.
stituency mechanism, where policies have a universal effect. In essence, this means that the ruling party is willing to forgo some of its current political power, by giving it to government agencies and giving these agencies some level of discretion in the development of their own insulation (and later autonomy).

In this paper, I set up a game in which the number of political actors vary, as does the level of political competition, as political power is represented by seat/vote share. The decision to create an insulated bureaucracy is based on the current vote share of each party, the amount of that vote share they are willing to expend to create a bureaucracy, the discounted future payoff of forming the insulated bureaucracy, and the parties’ expectations about future vote share, which I compress down into a two-period environment: today and tomorrow. This stylized game will help demonstrate the levels of competition and forward-thinking necessary to get opportunistic elites to give up control over a uni-dimensional policy regime for a payout that would be accessible to all competitors.

**Methodology**

Network formation games (NFGs) are a recent addition to the game theorist’s wheelhouse and formal political theory more generally. The technique has its roots in the application of mathematical graph theory by mathematicians, engineers, and statisticians. These early analyses were useful in describing connections between different social units for some sociologists and political scientists from the same era, but it was not until Roger Myerson’s Graphs and Cooperation in Games that network theory was used to understand strategic interactions between social systems (Myerson 1977). Myerson’s work linked graphs to cooperative game theory, and shows that while graph/network theory is useful in deterministic models such as those used in complex systems analysis (Cranmer, Desmarais & Menninga 2012, Henry, Lubell & McCoy 2011), it can also be used to model the strategic formation of political and economic networks by rational agents.

In their groundbreaking works, Jackson & Wolinsky (1996) and Bala & Goyal (2000) begin with the simple notion of networks as nodes and arcs to determine how, given a particular set of rules of how arcs and nodes can be arranged, agents strategically form links between each other. In Jackson & Wolinsky (1996), the addition of arcs requires agreement between the two nodes for which the arc would connect, while the subtraction of arcs only requires one node to dissolve the connection. In
the case of Bala & Goyal (2000), both arc addition and subtraction are unilateral decisions (only one node has to agree to add/subtract an arc). Between the two papers, it is easy to note that different formation rules result in the formation of different types of networks. These two papers accelerated the trend of working with NFGs in the social sciences (Jackson 2008). Work by Page & Wooders (2007b) has moved social scientists from strictly studying homogeneous linking networks, where the arcs are non-directional and all the same type, to studying heterogeneous directed networks, where the arcs have a specific direction and may be of multiple types and intensities.

The goal behind network formation games is to take the vast knowledge of strategic interactions from standard game theoretical literature and (a) attempt to make the structure less linear (b) and remove as many assumptions as possible while (c) maintaining the mathematical integrity of the game theoretic models. Essentially, the degree of complexity in relationships is maintained from standard game theory while the degree of complexity in the mathematics is not. Furthermore, NFGs see equilibrium as only one possible outcome of a game and instead focus on the dynamics of stability for multiple equilibria (Page, Wooders & Kamat 2005). Finally, all these properties lead to rigorous modeling that can be quickly comprehended visually via graphs and tables.

Two factors contribute to the beneficial blending of studies of federalism and network formation games. To begin with, NFGs do not presuppose strict rationality; a thin version is acceptable. In fact, NFGs could model bounded rationality and learning as types of arcs could change between different levels in a network (e.g. A local politician knows what her fellow politicians in a region are going to do, but she only has a vague sense of what politicians outside her district plan to do).

More important for this paper, NFGs also have the ability to readily scale up into supernetworks, in which the nodes are a particular network formation, and the arcs may be Markov chains or, as may be of more interest to social scientists, strategic network rules which dictate transitions between networks. These supernetworks can then act as one node in a super- supernetwork, etc. This is highly useful, since studies of federalism are interested in multi-level analysis. It is hypothetically possible to start with a psychological network of an individual weighing the probabilities of certain states of behavior, scaling it up to an operational situation where that individual interacts with others in local party elections, and continuing to scale up to the constitutional level.

Three important observations need further elaboration: First, an undercurrent in some academic literature leaves the impression that network theory can be a mindset or worldview, and this view is
often associated with support for democracy and democratic ideals, similar to ideas of polycentrism and self-governance. In this paper, I rely on networks solely as arcs and nodes in an analytical sense, without trying to delve into the normative theory of networks.\textsuperscript{11}

Second, as referenced above, network formations games as an analytical tool do not have to represent the formation of networks in a social network sense. Instead, as long as a formal theoretic interaction can be understood as some form of action or signal (the arc) between two actors (the nodes), network formation games can be used to analyze the game.\textsuperscript{12} For most practical purposes, however, NFGs are most useful when there are more than two nodes and arcs.

Third, network formation games are not the same as games on a network formation.\textsuperscript{13} In the latter case, the network is already formed, and players then decide to interact based on those connections; actors cannot interact with individuals with whom they have no connection. In NFGs, the connections themselves are what actors are deciding to form. This becomes a bit tricky with federalism, since some rules already dictate interactions amongst parties; however, our interest is primarily party interaction with the bureaucracy, for which federalism plays a different role.

\textit{Theoretical Design}

The game consists of simultaneous play amongst political parties. The parties can either form a link to the bureaucracy, which would indicate support for an insulated bureaucracy, or not form an arc at all. This game will result in a star network with potential isolates. In order to determine whether they will form a link, parties must determine the amount of power they currently have (called vote share), their discount rate, the amount of vote share necessary to form an insulated bureaucracy, the value of that bureaucracy for the future period, as well as their electoral risk in the next election. Since these are parameterized values, we can say something about the stable regions of these values that create basins of attraction (scenarios where players alternated between

\textsuperscript{11}In the non-analytical social science sense, a network can be a form of organization (Rainey 2009), a means of relaying people (e.g. trains, planes, and automobiles) or information (e.g. the Internet), or a policy tool used in New Public Management and bureaucratic politics (Agranoff & McGuire 2001). Unfortunately, networks have also been adopted as a term to modify or replace the term social capital. Often in those situations, networks provide a residual explanation for unexplained phenomena in a social theory.

\textsuperscript{12}For example, it would be possible (and perhaps enlightening) to model Cho & Kreps (1987)’s beer-quiche game as a network formation phenomena, where the nodes are the players and the types of food, and the actions are food consumption and duel/avoid.

\textsuperscript{13}Similarly, the literature makes a distinction between institutional theory and theories of institutions; see Diermeier & Krehbiel (2003).
multiple equilibria), indeterminacy, or a single equilibrium solution. My hypothesis is that parties are only going to consent to an insulated bureaucracy when discount rates are low, the bureaucracy can offer substantive power, and there are only moderate levels of electoral risk in a multi-party system.

Conclusions

I show that political parties facing an expected loss of governing power are more likely to insulate the bureaucracy if the bureaucracy can mitigate against some of those losses. These losing parties are willing to give up even more of their contemporary political power the greater the benefit of insulated bureaucracy. There may even be multiple parties that expect losses, but the conditions for cooperation are limited. Because of the zero-sum nature of electoral competition and the fact that an insulated bureaucracy would moderate the gains of the party gaining governing power, there will always be one party unwilling to legislate bureaucratic insulation.

By introducing federalism as a network of provincial political competitions, I show several mechanisms that may create “holdout” situations either for or against bureaucratic insulation: First, the malapportionment of provincial voting rights (one-district, one-member) can distort the underlying desire for, and thus likelihood of, bureaucratic insulation. Second, the strength of the national political elites as well as the (dis)similarity of provincial political environments can create a multiple veto-point situation for national party agendas concerning bureaucratic insulation. Third, provincial party units may sacrifice some of their provincial political power to signal to the national-level party their desire for bureaucratic insulation.

1.3.2 Mechanisms of Merit: A Comparative Investigation of the Causes of Increased Bureaucratic Insulation

Introduction

I test the boundaries of these game-theoretical levers, political competition and federalism, on a cross-national scale. In this paper, I expand from my analytical simulation to include over 100 states in a cross-sectional time series analysis.
Theoretical Design

Based on the hypotheses presented in the introduction, Figure 1.1 presents a basic causal diagram (Pearl 2000). Without replicating much of the discussion above, the key elements of the diagram are the fact that historical political institutions led contemporary regimes to adopt federal or unitary state structures. These historical factors include the adoption of classical liberal constitutions, the conflict between geographic centers of power within the state, and the strength of different sectoral interests in affecting policy outcomes. Similarly, historical political institutions affect the level of political competition. These include some of the same factors that affected the adoption of federal versus unitary structures, as well as the structure of elite competition prior to the rise of mass political participation and the adoption of particular electoral structures/formulas.

Federalism affects bureaucratic insulation by creating the possibility for holdouts from the general movement of the national government. Also, as argued in the discussion on federalism, the federal/unitary structure affects fiscal policy through the adoption of fiscal federalism, the ability of subnational regions to tax, as well as different policy positions amongst the subnational governments. Thus, the arrows from federal/unitary states point to both bureaucratic insulation and fiscal policy and implementation.

The two arrows from political party competition to bureaucratic insulation and fiscal policy and implementation can be understood in a parallel light. It is an increase in political party competition that drives party elites to delegate some of their power to the bureaucracy to achieve some level of insulation. Similarly, party competition affects the behavior of the government when it comes to issues such as political business cycles, the adoption of neoliberal reforms, setting tax rates, and the tension between de-commodifying labor and pursuing pro-business policies.

Finally, bureaucratic insulation primarily impacts fiscal policy and implementation through the rise of bureaucratic reputation. Once agencies have some measure of insulation, those agencies have the possibility to increase both their internal capacity/expertise and external legitimacy with political actors. These two factors give the agency a reputation which it can then leverage to create more insulation. At some point, insulation reaches a level upon which the bureaucracy is called on to influence all parts of the policy process. In fiscal agencies, this includes developing and continuously monitoring indicators of the economy, conducting cost-benefit analysis of potential
tax policies, consulting in the budgeting process for the government, and enforcing the tax code, as well as maximizing tax compliance. Thus, insulation, by way of reputation, has a robust effect on fiscal policy and its implementation.

Figure 1.1: Macro-theoretical Causal Diagram

The analysis for this section focuses on the inner ring of variables from the causal diagram. This section expands the analysis of the analytical narratives to examine whether federalism and political party competition have a statistically and politically significant effect on bureaucratic insulation across a large cross-section of countries. While the exact mechanisms of this relationship will have been discussed in the previous paper, this large-N study addresses the external validity of the argument. The historical political institutions have primarily been accounted for through the analytical narratives and by several of the control variables in the statistical analysis.

Data & Methods

I borrow my general approach from Wibbels (2005) and Lijphart (2012). I take a multi-method empirical approach using contingency tables, ordered logit models, and outcome matching. I begin by employing two-way contingency tables to look at the effects of variables of interest on different levels of insulation (Agresti 2013), then conduct a pooled cross-sectional time series approach using ordered logit statistical fit techniques (Long 1997, Long & Freese 2014), and finally use potential outcomes matching to evaluate the variables of interest in a pseudo-trial environment (Rubin 2005). I outline the main variables for the statistical analysis below. While my hypotheses above suggest the possibility of at least one interaction term between political competition and federal/unitary institutions, it is important to initially focus on fitting the model using main effects before the introduction of more complex interaction terms that are dependent on the main effects.
Bureaucratic Insulation is operationalized by using bureaucratic appointment criteria (BAC), a single observation of repeated values taken from the most recent Varieties of Democracy dataset (Coppedge, Gerring, Knutsen, Lindberg, Teorell, Altman, Bernhard, Fish, Glynn, Hicken, Lührmann, Marquardt, McMann, Paxton, Pemstein, Seim, Sigman, Skaaning, Staton, Wilson, Cornell, Gastaldi, Gjerløw, Ilchenko, Krusell, Maxwell, Mechkova, Medzh horsky, Pernes, von Römer, Stepanova, Sundström, Tzelgov, Wang, Wig & Ziblatt 2019). The explanatory and control variables are taken from multiple different datasets including the World Bank World Development Indicators (2019), the Inter-American Development Bank’s Database of Political Institutions (Cruz, Keefer & Scartascini 2015), and Norris (2008)’s underlying dataset Norris (2015). I create factor variables that encompass the core concepts of political competition and political party status (see the extended discussion in Section 1.3.1’s paper) and use a binary federal/unitary indicator.

Conclusions

Applying multiple models to a 172-country, 38-year panel dataset, I have found evidence that higher levels of political competition lead to higher levels of insulation and that federal states are more likely to have higher levels of insulation than unitary states, both independently increasing the likelihood of higher insulation. There may be an interaction effect, but it would further enhance both main effects by increasing the likelihood of competitive federal regimes having professional BAC. To fully test the theory as presented in Section 1.3.1, some measure of subnational competition, rather than just subnational party control, is required.

1.3.3 The Consequences of Bureaucratic Insulation for Public Organizations and Policy Outcomes

Introduction

Here, the analysis shifts focus from the causes of an institutional arrangement (bureaucratic insulation), to the causes of particular policy outcomes. This incorporates the entirety of the causal diagram, where bureaucratic insulation is now a causal factor in explaining fiscal policy outcomes. I claim that insulation, as represented by the empirical measure of bureaucratic appointment cri-

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14In order to maximize the number of country-year observations to be compared, I first forward fill and then backward fill the political treatment and control variables with their most recent value.
teria, can improve both bureaucratic processes and policy outcomes. I test this hypothesis against five variables of interest: two regarding internal bureaucratic processes (salaried bureaucrats and CSO consultation) and three policy outcome variables (the impartiality of public administration decisions, the degree of universal public good provision, and the fiscal status in given regimes).

**Theoretical Design**

As in the discussion of Paper 2 in Section 1.3.2, I outline the underlying causal relationship in Figure 1.2. In this paper, insulation, represented empirically by $BAC$ (as defined above), is the root of the diagram. Bureaucratic Salaried and CSO Consultation are both bureaucratic processes which can be affected by insulating the bureaucracy. These processes, coupled with insulation, then will have an impact on policy outcomes of the agencies within the external environment. In Paper 3, I go into significant detail as to the potential causal mechanisms (arrows) from $BAC$ to both the intermediary processes and the external outcomes.

![Figure 1.2: Bureaucratic Outcome Causal Diagram](image)

**Data & Methods**

Given an unbalanced panel consisting of 172 number of countries over the years 1980-2017, I adopt a standard panel model approach as laid out in Enders (2015) as well as the nested model approach to model building in Agresti (2013). I develop a baseline model with each of the response variables and the control variables and then add theoretically significant variables to that same model family. In order to avoid multiple hypothesis testing issues, I specify clear model families prior to testing.
The general model can be specified as

\[ Response_{it} \sim \alpha_{it} + \beta_{1it}[BAC] + \beta_{2it}[Controls] + \beta_{3it}[AltHypo] + \epsilon_{it} \]

where the response is one of the five selected variables below, the theoretical variable of interest is the \textit{BAC} (specified the same as in Paper 2), the control variables are political, economic, and geographic variables that theoretically influence the response variable, and AltHypo represents the alternative hypotheses to test the strength of the explanatory variable. The five response variables are:

1. **Salaried Bureaucrats**: the variation in salaried vs. non-salaried state administrators, ranging from a very small share being salaried to essentially all state administrators being salaried.

2. **Consultation with Civil Society Organizations (CSOs)**: the broad degree of CSO consultation with values ranging from no consultation with CSOs (or at least a general isolation of policymakers from CSO input) to formal and informal arrangements that ensure CSOs are recognized as important stakeholders and given voice.

3. **Public Administration Impartiality**: the range of public administration impartiality with values ranging on a scale of having no respect for the law (completely biased) to having high levels of respect for the law (highly impartial).

4. **Particularistic vs Public Good Provision**: how states chose to apportion their spending towards particularistic or universalistic good provision. Values range from mostly particularistic to mostly universalistic and are converted to an interval scale from a categorical response.

5. **Government Fiscal Standing**: operationalized as the difference between government revenue and government expenditures as a percentage of GDP.

Four models are run for each response variable: [1] A baseline model which includes the intercept as well as the variables in \( \beta_{2it} \) and the fixed-effects errors. From this model, we can gauge the effects of the theoretically salient variables as well as provide a goodness-of-fit. [2] The baseline model plus \( \beta_{1it}[BAC] \). This model tries to cleanly demonstrate the effect of \textit{BAC} on the response
variables. After assessing the effect on the responses of bureaucratic salaried and CSO consultation, these variables are included in this model as potential pass-through effects as they are all internal organizational processes for the bureaucracy. [3] The baseline model with the $\beta_{3it}$ variables; this model provides the strongest case for the alternative hypotheses. Finally, [4] the completely specified model as shown above (theoretical variables, alternative hypotheses, and the control variables). This model shows the strength of the hypothesis when in the presence of the alternatives.

Conclusions

Of the five variables of interest, three find a significant relationship with insulation in the panel dataset: policymaker consultation with CSOs, public administration impartiality, and public good provision all increase as bureaucrat insulation increases. Based on the literature discussed above, these three are the most important to democracy as they directly affect citizens perceptions of fairness, equity, and voice within state decision-making.

1.4 Discussion & Implications: Why Bureaucratic Insulation?

Much of the literature in comparative politics has ignored the important role of bureaucratic institutional development, and in several of the instances where it has not, bureaucratic development has been relegated to indicators of state capacity. This is not particularly surprising, as American political science and public policy scholars subsumed the study of American bureaucracy under the heading of implementation (Pressman & Wildavsky 1973, Lynn 1996, Stillman 1999).

There are few studies on bureaucratic development despite its importance, thus this project makes several contributions. First, it begins to fill gaps in the literature on democracy/democratic consolidation (O’Donnell & Schmitter 1986, O’Donnell 1994) and the welfare state (Haggard & Kaufman 2008, Huber & Stephens 2012). Second, it addresses public policy debates on discretion (Fiorina 1989, Parker 1992, Epstein & O’Halloran 1999, Huber & Shiplan 2002) and insulation (McCubbins, Noll & Weingast 1989, Wilson 1989, Carpenter 2001a), rooted in studies of US policymaking. Finally, it has important policy implications for practitioners interested in improving the delivery of government services in less developed countries (Rudra 2007).
This research is motivated by the empirical puzzle demonstrated in the figure below, where the change in real gross domestic product of Argentina and Uruguay closely follow one another, but the World Governance Indicator of government effectiveness shows an increasing gap between the two states, with Uruguay maintaining much higher levels of effectiveness; this effect is true for almost all of the World Governance Indicators: Uruguay at least maintains, if not improves their score (and ranking), while Argentina’s score generally falls and plateaus. These differences cannot be explained by other economic or social issues; rather, the political variables mentioned above provide a better explanation for the difference in government outcomes. My goal, then, has been to try to determine how these political mechanisms work in tandem, given the understanding that the bureaucracy is the primary mechanism through which the governance is judged.
CHAPTER 2

FEDERALISM, PARTY COMPETITION, AND BUREAUCRATIC INSULATION: POCKETS OF EXCELLENCE OR STRATEGIC HOLD-OUT?

Developing bureaucratic insulation is an important process in achieving an advanced welfare state; insulation allows bureaucracies to cultivate expertise, represent marginalized interests, and provide programmatic service delivery. For elected officials, an insulated bureaucracy serves as an outlet for constituency services and a means of credible policy commitment. In this chapter, I analyze the relationships between federalism, party competition, and bureaucratic insulation by developing a non-cooperative network formation game in which political parties compete for power in both unitary and federalist systems. Besides alternating these institutions, I vary the number of parties, allow for heterogeneous initial power endowments, and have parties competing at multiple levels of government. Federalism may achieve localized insulation easier than in unitary states, but those same properties may make it more difficult to create national levels of bureaucratic insulation.

2.1 Introduction

My study develops a formal theoretic model to explain variations in national-level bureaucratic institutions. I use network formation game theory to explain why elites would give up some of their political power toward insulating the bureaucracy. In particular, I focus on the roles that political competition and federalism play in this process. Building on Barbara Geddes' (1991, 1994) pioneering work, I hypothesize that political elites grant political insulation to the bureaucracy in order to minimize electoral losses in politically competitive environments. Network formation games are particularly helpful for analyzing the multilevel political environments found in federalism systems (e.g., politics in California looks very different than politics in Ohio, and both of those are look different from the national political environment in the US).

Initial acts of insulation typically take the form of meritocratic control over hiring and firing
within government bureaus. Given this insulation, bureaucratic agents begin to develop the potential for political legitimacy and expert capacity, which further increases the level of insulation and begins the process of political autonomy for bureaucratic institutions. Insulation and autonomy give the bureaucracy discretion over the execution of laws and a sense of identity/mission (Selznick 1957, Wilson 1989). These factors give agencies the day-to-day resources necessary to perform agency tasks in a responsive and competent manner, something citizens in modern states have come to expect (Meier & Bohle 2007). Moreover, autonomy in particular arenas (e.g. central banking) provides the basis for credible commitment (Moe 1995, Keefer & Stasavage 2002). Thus, bureaucratic insulation is essential for effective and quality governance.

I set up a game in which the number of political actors vary, as does the level of political competition, as political power is represented by seat/vote share. The decision to create an insulated bureaucracy is based on the current vote share of each party, the amount of that vote share they are willing to expend to create an insulated bureaucracy, the discounted future payoff of forming the insulated bureaucracy, and the parties’ expectations about future vote share, which I compress down into a two-period environment: today and the future. This stylized game demonstrates the level of competition and forward-thinking necessary to persuade opportunistic elites to give up control over a unidimensional policy regime for a particular payout accessible to all competitors.

I focus on the roles of federalism and parties in determining the emergence of bureaucratic insulation (see Table 2.1). I begin with the hypothesis that a noncompetitive federalist state is more likely to have some level of bureaucratic insulation, as the federalist structure allows different states to create insulated local bureaucracies or to offer provincial sovereign support for national bureaucracies, leading to “pockets of excellence” (Geddes 1994). In a unitary state with similarly low levels of competition, there are fewer loopholes through which to form insulated bureaucracies; thus the unitary state has the lowest likelihood of bureaucratic insulation.

On the other hand, high levels of political competition in a unitary state increase the likelihood of extensive bureaucratic insulation compared to federalist states, since the same structures that created pockets of excellence in noncompetitive federalist states also allow hold-out provinces in

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1 This is similar to Wibbels (2005) work on federalism, party structure, and macroeconomic policy reform. However, I focus on institutional reform, rather than policy reform; also, I take a step back from partisan harmony and concentrate on the existence of party competition, without which partisan harmony may not matter.
Table 2.1: Basic Theoretical Overview

<table>
<thead>
<tr>
<th>Level of Party Competition</th>
<th>Low Competition</th>
<th>High Competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulation at the National Level</td>
<td>Unlikely</td>
<td>Likely</td>
</tr>
<tr>
<td>Federal State Type of Institution</td>
<td>Most Unlikely</td>
<td>Most Likely</td>
</tr>
<tr>
<td>Unitary State</td>
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</tr>
</tbody>
</table>

highly competitive federal states. These provinces hold out against programmatic bureaucratic insulation because they lack the highly competitive environment that would force provincial political elites to adhere to national policy. The U.S. is a perfect example: many states with uncompetitive elections, whether Democrat or Republican, are more likely to exhibit partisan tendencies in the bureaucracy, while the national government has granted much higher levels of insulation to federal bureaucracies (Ringquist 1993).

To briefly summarize, the nature of a federal or unitary state and the level of political party competition affect the likelihood of that state developing insulated public bureaucracies at the national level. A single provincial government within a federalist system can exhibit dramatic political differences from the other provincial governments or the national government within the same system. This means that in a country that lacks broad political competition, provincial competition may lead to the creation of insulated provincial bureaucracies. However, it also means that in a system with broad party competition, some provincial governments may lack competition and thus prevent or hinder the formation of insulated agencies. Hence, unitary states represent both extremes of bureaucratic insulation, depending on the level of competition within the party system (an all-or-nothing situation). In this paper, the result of modeling long-term political party competition is forward-looking political actors who develop insulated bureaucratic agencies as a solution to this competition.

The next section discusses several reasons for using network formation games to discuss the formation of bureaucratic insulation and reviews the rise of network formation games in social science literature and how they can help illuminate multi-level analyses. Section 2.3 describes the tools needed to build the network game, as well as the utility function and payoffs the political parties in the game face, placing the reader in the role of the leader of a political party. Section 2.4 delves into the analysis of the unitary state, beginning with a single party and then analyzing
outcomes from interactions in a multi-party system. Section 2.5 builds on this analysis by using supernetworks to assess possible federal networks. Finally, Section 2.6 concludes with an informal discussion and future extensions.

2.2 Why Network Formation Games?

In order to develop this theory of bureaucratic insulation, we need a tool that will both model basic party decisions at the provincial level, and then take the results of those decisions and place them within the multi-level structures found in federalist states. Network formation games (NFGs) provide a simple, informative, and rigorous means of modeling how structures and individual choices affect outcomes at a systems level; it creates networks of strategic interaction based on the building blocks of networks, nodes (actors) and arcs (actions or relationships). These strategically formed networks can then be treated as a node within a larger "supernetwork" and the arcs of the supernetwork may be Markov chains (stochastic processes) or, of interest to social scientists, strategic network rules, dictating transitions between networks. These supernetworks can then act as one node in a super-supernetwork, etc. Moreover, NFGs do not presuppose strict rationality; a thin version is acceptable. In fact, NFGs could model bounded rationality and learning, as the types of arcs could change between different levels in a network (e.g. A local politician knows what her fellow politicians in a region are going to do, but she only has a vague sense of what politicians outside her district plan to do). Thus, it is hypothetically possible to start with a psychological network of an individual weighing the probabilities of certain states of behavior, scaling it up to that individual interacting with others in local party elections, and continuing to scale up to the national political level.

Network formation games are a recent addition to the game theorist’s tool shed and formal political theory more generally. The technique has its roots in the application of graph theory by mathematicians, engineers, and statisticians. Early sociological and economic analyses were useful in describing connections between different social units, but it was not until Roger Myerson’s *Graphs and Cooperation in Games* that network theory was used to understand strategic interactions between social systems (Myerson 1977). Myerson’s work linked graphs to cooperative game theory, and showed that while graph/network theory is useful in deterministic models such
as those used in complex systems analysis (Cranmer, Desmarais & Kirkland 2012, Henry, Lubell & McCoy 2011), it can also be used to model the strategic formation of political and economic networks by rational agents.

In their groundbreaking works, Jackson & Wolinsky (1996) and Bala & Goyal (2000) begin with this simple notion of networks as nodes and arcs to determine how, given a particular set of rules on their arrangement, agents strategically form arcs between nodes. In Jackson & Wolinsky (1996), the addition of arcs requires agreement between the two nodes the arc would connect, while the subtraction of arcs only requires one node to dissolve the connection. In the case of Bala & Goyal (2000), both arc addition and subtraction are unilateral decisions (only one node has to agree to add/subtract an arc). Between the two papers, it is easy to note that different formation rules result in the formation of different types of networks. These two papers accelerated the trend of working with NFGs in the social sciences (Jackson 2008). Work by Page & Wooders (2007b) has moved social scientists from strictly studying homogeneous linking networks, where the arcs are non-directional and all the same type, to studying heterogeneous directed networks, where the arcs have a specific direction and may be of multiple types and intensities.

The goal behind network formation games is to attain the same insights from standard game theoretic literature, such as the difficult to achieve collective action (Prisoner’s Dilemma), the need to understand how an interaction is going to end to know how actors will act at the beginning (backwards induction), and what motivates cooperation when we do observe it (veto/threat points, the folk theorem). NFGs do this while (a) allowing social scientists to relax or alter many of the assumptions about the strategic environment and how actors interact and (b) seeing equilibrium as only one possible outcome of a game, and instead focus on the dynamics of stability for multiple equilibria (Page, Wooders & Kamat 2005). Essentially, the degree of complexity in relationships and interactions is maintained or enhanced from standard game theory, while the degree of complexity in the mathematics is not. Finally, all of these properties lead to rigorous modeling that can be quickly comprehended visually via graphs and tables.

Three important observations need further elaboration. First, an undercurrent in some of the less academic literature leaves the impression that network theory can be a mindset or world-view often associated with support for democracy and democratic ideals, similar to ideas of polycentrism and self-governance (Rhodes 1996, Goldsmith & Kettl 2009). In this paper, I rely on networks solely
as arcs and nodes in an analytical sense, without reference to the normative theory of networks.\footnote{In the non-analytical social science sense, a network can be a form of organization (Rainey 2009), a means of relaying people (e.g. trains, planes, and automobiles) or information (e.g. the Internet), or a policy tool used in New Public Management and bureaucratic politics (Agranoff & McGuire 2001). Unfortunately, networks have also been adopted as a term to modify or replace the term social capital. Often in those situations, networks provide a residual explanation for unexplained phenomena in a social theory.}

Second, as referenced above, network formation games as an analytical tool do not have to represent the formation of social networks. Instead, as long as a formal theoretic interaction can be understood as some form of action or signal (the arc) between two actors (the nodes), network formation games can be used to analyze the game.\footnote{For example, it would be possible (and perhaps enlightening) to model Cho & Kreps’s (1987) beer-quiche game as a network formation phenomena, where the nodes are the players and the types of food, and the actions are food consumption and duel/avoid.} For most practical purposes, however, NFGs are most useful when there are more than two nodes and arcs.

Third, network formation games are not the same as games on a network formation.\footnote{Similarly, the literature makes a distinction between institutional theory and theories of institutions; see Diermeier & Krehbiel (2003).} In the latter case, the network is already formed and players then decide to interact based on those connections; actors cannot interact with individuals with whom they have no connection. This is the type of modeling seen in ecology of games papers (Long 1958, Lubell 2013). In NFGs, the connections themselves are what actors are deciding to form. This becomes a bit tricky with federalism, since some rules already dictate interactions amongst parties; however, our interest is primarily party interaction with the bureaucracy, for which federalism plays a different role.

### 2.3 The Network

#### 2.3.1 Nodes

The primitive elements of any network are a finite set of nodes $N$ with individual nodes $i$ and a finite set of arcs $A$ with a typical element $j$.\footnote{While scientists agree on the basic building blocks of networks, the terminology is more diverse. Networks are also known as graphs; nodes are often referred to as vertices; and arcs are often known as links, curves, edges, lines or arrows.} In this model, the nodes $N$ include the finite set of parties $D \in N$ and the bureaucracy $B$. Since we see multi-party coalitions forming in systems with more than two parties, let $S$ represent one such coalition and $\Gamma(D)$ the collection of all coalitions. Since a coalition can consist of a single party, if a network exists, we know that $S \neq \{\emptyset\}$. In this paper, we will see coalitions ranging from one to three political parties.
2.3.2 Arcs

The arcs represent different actions taken by parties and the bureaucracy towards each other. This means that the arcs have different directions (from a party to the bureaucracy, or from the bureaucracy to the parties), different substantive meanings, and different intensities. These are called labeled arcs, and are represented by \( j_x(i, i') \), where \( x \) represents the meaning and intensity of arc \( j \), which is directed from actor \( i \) to actor \( i' \). If one were to think of an interaction between a person \( d \) and a vending machine \( B \), then \( j_{\text{dollar}}(i_d, i_B) \) will purchase and return \( j_{\text{3musketeers}}(i_B, i_d) \), something different from \( j_{\text{quarter}}(i_d, i_B) \) (who knows what one can purchase for a quarter these days?).

2.3.3 Network Structure

The combination of labeled arcs and nodes form a heterogeneous directed network, \( G \) (Page, Wooders & Kamat 2005). In this game, the feasible set of networks, \( G \) (networks that can possibly exist given the parameters of the model), consists of all nodes \( N \) and the subset of arcs \( j \subset A : j(i_d, i_B) \) which are actions from the parties toward the bureaucracy, or \( j(i_B, i_d), d \in D \) which are actions from the bureaucracy towards individual parties. While there obviously are many forms of connection possible between political parties, the behavior of parties with respect to bureaucratic insulation are here illustrated with arcs forming only between parties and the bureaucracy, or more specifically, legislation enabling bureaucratic insulation, and then from those insulated bureaucracies back to the political parties. In this back-and-forth relationship, a circuit is defined as a finite sequence of arcs \( \{ j(i, i')_k \}_{k=1}^h \) in network \( G \) such that node \( i \) of arc \( j(i, i')_1 \) and node \( i' \) of arc \( j(i, i')_h \) are the same node; basically, this states that the first actor to create an arc is also the last actor to receive one.

2.3.4 Preferences and Payoffs

Now that we have defined what actors could do if any type of link could be formed, we need to define how they decide what they want to do, i.e. their preferences. Preferences are binary relations on the feasible set, \( G \), which means that parties are able to rank all of the feasible networks in

---

6 Moving forward, I will simply refer to \( j \) as an arc, though in all instances, it is a labeled arc.

7 \( G \) is a subset of \( A \times (N \times N) \) with individual ordered pairs \( (j(i, i')) \in G \).
order of preference (though in some settings, a party may be indifferent between two networks, since their payoffs are the same). Mathematically, a party \(d \in D\) is said to have a *strong* preference (an irreflexive binary relation, i.e. no indifference), \(G' \succ_d G\), if party \(d\) strongly prefers network \(G' \in \mathbb{G}\) to \(G \in \mathbb{G}\). Similarly, coalitions of parties \(S \in \Gamma(D)\) *strongly* prefer network \(G'\) to \(G\), written \(G' \succ_s G\) if \(G' \succ_d G\) for all parties \(d \in S\). Player \(d \in D\) is said to have *weak* preferences, written \(G' \supseteq_d G\), if \(d\) either strongly prefers \(G' \succ_d G\) or is indifferent between \(G' \sim_d G\). Given this definition of weak preferences, a coalition \(S \in \Gamma(D)\) weakly prefers network \(G'\) to \(G\), denoted \(G' \succ_w G\) if for all \(d \in S\), \(G' \succ_d G\) and if for at least one party \(d'\), \(G' \succ_{d'} G\). To encompass the possibility of either weak or strong preferences, I use \(\succ_{\pi S}\) to symbolize the preference relation of coalition \(S\), where \(\pi\) can take on the value \(w\) or \(s\).

The best way to understand preferences is to put ourselves in the shoes of a political party that has recently been elected in period \(t\). We have a certain amount of governing power, which is based on our vote share \(v_{dt}\). This power encompasses both our ability to set a legislative agenda and pass preferred legislation. The basic maximization problem for our Party \(i_d\), \(d \in D\) where \(D\) is a finite set of parties,\(^9\) is as follows:

\[
\max_{v_{dt}} u_d = v_{dt} + \delta E_t[v_{dt+1}] \tag{2.1}
\]

where \(v_{dt}\) is the proportion of votes (or vote share) controlled by Party \(d\) in time \(t\), such that \(\sum_i v_{dt} = 1\). Our party’s present welfare is based on our current vote share and the discounted present value of our future expected vote share. This means that we prefer (hypothetical) network \(G\) to \(G'\) if the former has a greater total vote share over both periods than the latter. Since the next period’s vote share should have at least a minimal connection to today’s share (Friedman & Holden 2009), this equation can be rewritten as

\[
\max_{v_{dt}} u_d = v_{dt} + \delta E_t[\kappa_{dt+1}]v_{dt} \tag{2.2}
\]

where \(\kappa_d\) is a change parameter for our Party \(d\). \(\kappa\) can be interpreted in many different ways, either as a production function \(\kappa_d(v_{dt})\) that converts invested current vote share \(v_{dt}\) into future vote share

\(^8\)The second condition of this statement makes weak preferences for coalitions irreflexive as well, whereas weak preferences for individual parties are reflexive.

\(^9\)Hereafter, Party \(i_d\) is equivalent to Party \(d\), as the \(i\) indicates a node in a particular network formation \(G\) and in future analysis, parties will exist in multiple provinces or \(G\) and \(G'\).
$v_{dt+1}$. Alternatively, $\kappa_d$ could be understood as a Gaussian random walk between 0 and $\frac{1}{v_{dt}}$. In the basic game, I assume that $\kappa$ is common knowledge, i.e. it is known not just by our party but also by all other parties. A more complicated variation on the game, with knowledge of one’s own $\kappa_d$ but uncertainty about others’ $\kappa_{d'}$, could be modeled using a Bayesian information game, since all $\kappa_d$ are contingent on each other (as vote share cannot exceed 100 percent). Regardless, our party expects to gain or lose vote share based on its current level with the gains/losses represented by $\kappa_d$. Since this occurs in the future, it is discounted by $\delta$.\(^{10}\)

### 2.3.5 Rules and Strategic Behavior

The rules of the game $\mathbf{R}$ are straightforward: only the parties $i_d, d \in D$, can form arcs with the bureaucracy $i_B$, hence the feasible set $\mathcal{G}$ described above. Arc formation is unilateral (Bala & Goyal 2000), which means that any $i_d$ can form or remove an arc $j_d$ originating from $i_d$ to $i_B$ (or another $i$ if the game were to expand to include other actors). The bureaucracy $B$ cannot form links of its own without first receiving enough vote share $v^*$. Once $B$ has received this amount, the bureaucracy creates arcs with all parties $j_B(i_B, i_d) \forall d \in D$. The rules of network formation define what a particular coalition $S$ can do on the feasible set $\mathcal{G}$, creating an effectiveness relation (a change a party or coalition can make) $\{\to S\}_{S \in \Gamma(D)}$. Thus, if $G \to S G'$, then coalition $S$ can change from network $G$ to network $G'$ by adding, subtracting, or altering the value of arcs in $G$.

In this model, strategic behavior is inserted through the choice of whether or not to create an insulated public bureaucracy ($\beta$). In order to give this political insulation, parties must give some of the present political power (represented as vote share $v_{dt}$) to the bureaucracy. Also, because the bureaucracy has an effect on more than just our party (a collective action dilemma), $i_B$ needs to receive more votes than some minimum value $v^*$ from either our party or some coalition of parties $S$, else we will not receive any return on our political investment. Within the literature, there are three primary arguments for this voluntary transfer of power.

First, political parties may employ some level of transactions cost reasoning. At some point, even the most clientelistic of governments needs to accomplish noticeable tasks and merely having the structures in place and filling those positions through nepotism fails to accomplish the given

\[^{10}\text{In this paper, I treat all parties as having the same discount rate. There is abundant literature showing that different levels of “patience” easily dominate other dynamics of interest; see chapters 4 and 5 in Fudenberg & Tirole (1991) for a introductory discussion.}\]
tasks. Alternatively, there may be some services provided by the government within which a critical mass of the individuals have at least some minor sense of noblesse oblige (e.g. doctors). Either way, the elites have two options: closely administer these tasks themselves or delegate the tasks. Choosing the former means the dedication of time and energy, which may come at the expense of other tasks meant to increase the power of the party. Choosing the latter means the party elites must devolve enough political power down to the agency to achieve the task. Thus, as Epstein & O’Halloran (1999) and Huber & Shipan (2002) put it, political elites face a similar position as private firms as to whether to make or buy a product; the product in this case being a policy. Most importantly for our purposes, before the parties have the opportunity to buy a particular policy from the bureaucracy, they must first buy some level of competence in the bureaucracy, lest they doom themselves to inefficient and ineffective policy outcomes (i.e. always purchasing lemons).

Similar to the transactions cost literature, Stokes, Dunning, Nazareno & Brusco (2013) discuss the three-way interactions between constituents, legislators, and brokers in clientelistic societies. In their discussion, Stokes et alia argue that legislators may want to remove the brokers or political middlemen, as the net cost of maintaining clientelistic networks\(^{11}\) outweighs the net cost of establishing programmatic public policies upon which voters must identify broader political outcomes with particular parties or politicians (retrospective voting). In this case, the competition is not strictly between political party elites, but also between politicians and individuals or groups that provide constituency services in exchange for votes.

Second, if political parties are going to give up some of their power to buy a bureaucracy and public policies, they at least gain the right to complain about it and blame the bureaucracy for mistakes (Gormley 1986). In the language of Fiorina (1989), political officials may desire to take advantage of constituency services. Offered as an explanation for Mayhew’s (1974) vanishing marginals in the U.S. Congress, Fiorina points to the ability of incumbents to use constituency services to their advantage. This not only included items such as the ability to use the U.S. printing services, but also for the incumbents to inquire into the workings of the bureaucracy for their constituents. For example, U.S. Representatives can have their staff contact the Social Security Administration concerning the application of one of their constituents for Disability Insurance.

\(^{11}\)i.e. having voters loyal to a potentially disloyal broker who may also be pocketing resources delegated towards increasing voter turnout
Since the SSA’s administrative funding is contingent on Congress, Fiorina contends that these inquiries receive more immediate attention than the system would otherwise predispose. Similarly, the FCC was unaware of the controversial nature of the Used Car Rule or the Funeral Industry Practice Rule until used-car salesmen and undertakers began to contact their Congresspersons, who were then able to pressure the FCC to back down on their administrative proposal (Wilson 1989).

In both of these cases, the reputation gains of the politicians are contingent on a) the somewhat clear distinction between the representative’s and the bureaucracy’s policy positions, and b) that the elected official would be able to exert power over the bureaucracy, whether to force the agency to provide a service or reverse an administrative law/policy. If the first contingency does not exist, constituents who vote economically will logically tie “what the government does” with “what the bureaucracy does,” even if the party has nothing to do with the outcome. Thus, it is in the interest of the government to create a bureaucratic scapegoat for policy outputs and outcomes, less the opposing political parties gain vote share and take over governing.

Third, and the primary approach used in this paper, political elites may be engaging in a process that can be modeled as a political rational expectations approach (Alt & Lassen 2006). This case depends on the existence of multiple parties capable of winning an election and forming a government in the future. Here, the incumbent party knows that it is highly likely they will someday be a minority/opposition party in the government and thus will forgo the use of some of their contemporary political power to form an (semi-)autonomous bureaucracy (Moe 1995). By forming different agencies and imbuing them with political power, the incumbent government can also instill in these agencies a particular mission and culture which, once established, is difficult to change (Wilson 1989). The idea is to put subsequent governments into something of a policy straight-jacket. Even if allocating political power to an agency does not tie the hands of future governments, it will at least force those coalitions to spend noticeable amounts of political capital to restructure or restrain the bureaucracy.12

Based on this third model of political rational expectations, we drop time subscripts and sub-

12Which policy arenas are delegated to the bureaucracy is up for debate: incumbents may decide to hand over the reins on policy areas in which they have no strong preference, but they know the opposition has more at stake. Alternatively, the government may wish to relinquish control of public policies for which they have a strong preference in order to mitigate the changes future governments wrought on their area of interest.
stitute in this strategic behavior into equation (2.2) to produce

$$\max_{v_d} \ u_d = (1 - \theta_d)v_d + \delta E[\kappa_d]\frac{1}{1 + \max_d \left| \sum_{d'}=1^n \theta_d v_{d'} \geq v^*, 0 \right|} \cdot \beta \cdot v_d$$

(2.3)

s.t. \( \{\delta_d, \theta_d\} \in [0, 1], \beta \in [0, \infty), \kappa_d \in \left[0, \frac{1}{v_d}\right] \).

Here, \( \theta_i \) is the share of votes our party \( i_d \) willingly gives up today in order to facilitate the formation of a separate entity, in this case, the bureaucracy \( i_B \). In return for the foregone vote share today, we expect to receive some electoral benefits from the bureaucracy, \( \beta \), conditional on their proportional power to enact the bureaucracy. While \( \beta \) could take on many different functional forms, in this model the bureaucracy minimizes the change in vote share between the present and future periods.

### 2.3.6 Stability

Within a standard game theoretic setting, defining the actors, their preferences, and the rules or structure of the game is enough to determine the expected outcome of the game: its equilibrium. Loosely speaking, stability is the network theory equivalent of equilibrium in standard game theory. Instead of focusing on a particular equilibrium point, network formation games focus on basins of attraction, which is a set of equivalent networks to which strategic network formation may tend and from which there is no escape.  

There can be more than one basin of attraction within \( G \), which allows for analysis of multiple equilibria: a singleton basin of attraction (only one network form as a solution), a single basin of attraction (where multiple networks are equivalent), or multiple basins of attraction (with two distinct groups of equivalent networks). This paper focuses on two types of stability: Farsighted stability (also known as Farsighted consistency) and Nash stability.

**Nash Stability** A subset of networks \( E \) is said to be Nash stable if, given any network \( G \in E \) if for all \( G' \in E \) and \( S \in \Gamma(D) \) such that \( |S| = 1 \), \( G \to_S G' \) implies that \( G \not\sim_S G' \). Less formally, a network is Nash if, whenever any party has the effectiveness relation to change the network \( G \) to another network \( G' \), no party has the preference \( \succ_d \) to do so (Page & Wooders 2009).

**Farsighted Stability** A subset of networks \( F \) is said to be farsightedly stable if, given any network \( G \in F \) if for all \( G' \in F \) and \( S \in \Gamma(D) \) such that \( |S| = 1 \), \( G \to_S G' \) implies that \( G \not\sim_S G' \). Less formally, a network is farsightedly stable if, whenever any party has the effectiveness relation to change the network \( G \) to another network \( G' \), no party has the preference \( \succ_d \) to do so (Page & Wooders 2009).

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13 See Page & Wooders (2009) for a formal definition.
14 The other two common forms of stability are Pairwise stability and Strong stability. For existence and non-emptiness proofs of stable sets, see Chwe (1994), Page & Kamat (2005), and Page & Wooders (2007b).
15 Note that Nash is not conditional on non-cooperative network formation rules.
$G_0 \in F$, when coalition $S_1$ deviates from $G_0$ to $G_1$ (i.e. $G_0 \rightarrow S G_1$ and $G_1 \succ_{\pi S_1} G_0$), there exists further deviations (by some other coalition) leading to $G_2 \in F$ where $\sum_S v_d(G_2) \leq \sum_S v_d(G_0)$, i.e. $S_1$ is left at least no better than before, if not worse off. A network $G \in G$ is said to be farsightedly stable if $G \in F$ where $F$ is farsightedly consistent (Page & Kamat 2005).

Finally, note that supernetworks (also known as "networks of networks") can be imposed on any given network structure. This is easily seen by thinking of each $G \in G$ as a node in the supernetwork and different types of arcs create different supernetwork relations. For example, Page & Wooders (2007a) develop preference supernetworks, where arcs represent the preference ordering $\succ_S$ for a particular coalition $S$, represented as $G_\pi$. Alternatively, the arcs could represent changes in the network formation rules $R$ (supernetwork $G_\rho$), or some combination of both rules and preferences (supernetwork $G_{\pi \rho}$). These supernetworks $G$ could then hypothetically be ordered within a super-supernetwork with a different relation connecting $G$ and $G'$. This flexibility is useful for the analysis of multilevel systems such as the analysis of federalism presented in Section 2.5.

The essential premise of the model is this: in a political system where multiple parties have a reasonable chance of forming a government,\footnote{Of course, once inserted into the game environment, these parties could in fact be factions within an authoritarian regime (e.g. the military, secret policy, financial backers). As Przeworski (2010) notes, however, these rotations in the ability to govern are rarely self-enforcing equilibria as found in consolidated democracies.} the governing coalition will see fit to change the role of the public bureaucracy from a particularistic patronage machine, i.e. the spoils system, in which positions are handed out in exchange for votes or broader loyalty, to a programmatic constituency mechanism, where policies have a universal effect. This means that the governing party or coalition is willing to forgo some of its current political power by giving it to government agencies and giving these agencies some level of insulation and discretion in the development of their own autonomy, which limits the potential losses of the governing coalition to challengers.

2.4 The Unitary State

2.4.1 One-Party System

Now that the underlying structure of the game is set up, let us start in a unitary political system: Our party is the only one in existence. This will allow us to evaluate the decisions all parties
may face without potential competition. We will add in opposition parties to analyze their impact on our decision-making in Section 2.4.2. As we can see from Table 2.2, there are four possible network formations, and thus outcomes for our party: First, our party does not invest any of its power into insulating the bureaucracy and thus, there is no benefit from insulating the bureaucracy \((G_{101})\). Second, our party does not invest, but somehow the bureaucracy is still able to minimize the change in our future vote share. Since this violates the rules of the game \(R\), \(G_{102}\) is not in the feasible set \(G\) and thus eliminated from evaluation. Third, our party invests vote share in insulating the bureaucracy, but it is not enough power to insulate the bureaucracy (i.e. \(\theta_1 v_1 \leq v^*\)), therefore our party does not receive the effects of bureaucratic insulation \((G_{103})\). Finally, our party invests enough vote share to insulate the bureaucracy and the bureaucracy completes the circuit by providing the bureaucratic effect for our party \((G_{104})\).

Table 2.2: All One Party Networks

<table>
<thead>
<tr>
<th>(j_B) ((i_B, i_1))</th>
<th>(G_{101})</th>
<th>(G_{102})</th>
<th>(G_{103})</th>
<th>(G_{104})</th>
</tr>
</thead>
<tbody>
<tr>
<td>(j_1) ((i_1, i_B))</td>
<td>(G_{101})</td>
<td>(G_{102})</td>
<td>(G_{103})</td>
<td>(G_{104})</td>
</tr>
</tbody>
</table>

Figure 2.1: All One-Party Networks

The payoffs are a mapping \(\{v_d(\cdot)\}_{d \in D}\) from network \(G \rightarrow \mathbb{R}\) for Party \(i_d\). Here, an arc \(j\) from Party \(d\) to the bureaucracy \(B\) can be understood as investing \(\theta\) amount of that party’s vote share into insulating the bureaucracy; therefore, \(\theta\) can be understood as the intensity of \(j_d\) for any given Party \(d \in D\).

Comparing the strategies of not forming an arc \((G_{101})\) with forming an arc with \(B\) \((G_{103}\) and
Table 2.3: Payoffs for All One-Party Networks

<table>
<thead>
<tr>
<th>$j_B$</th>
<th>$j_B(i_B, i_1)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$v_1(G_{101}) = v_1 + \delta E[\kappa_1]v_1$</td>
<td>$v_1(G_{102}) = DNE$</td>
</tr>
<tr>
<td>$v_1(G_{103}) = (1 - \theta_1)v_1 + \delta E[\kappa_1]v_1$</td>
<td>$v_1(G_{104}) = (1 - \theta_1)v_1 + \delta E[\kappa_1]^{\frac{1}{1+\beta}}v_1$</td>
</tr>
</tbody>
</table>

$G_{104}$ yields

$$v_d + \delta E[\kappa_d]v_d \leq (1 - \theta)v_d + \delta E[\kappa_d]^{\frac{1}{1+\beta}}v_d$$

(2.4)

$$0 \leq -v_d - \delta E[\kappa_d]v_d + v_d - \theta v_d + \delta E[\kappa_d]^{\frac{1}{1+\beta}}v_d$$

$$\theta \leq -1 - \delta E[\kappa_d] + 1 + \delta E[\kappa_d]^{\frac{1}{1+\beta}}$$

$$\theta \leq \delta E[\kappa_d]^{\frac{1}{1+\beta}} - \delta E[\kappa_d]$$

$$\theta \leq \delta (E[\kappa_d]^{\frac{1}{1+\beta}} - E[\kappa_d]).$$

(2.5)

Thus, if the sign from equation (2.5) holds, then our party prefers $G_{104} \succeq_1 G_{101} \succ_1 G_{103}$, since the outcomes rank $v_1(G_{104}) \geq v_1(G_{101}) > v_1(G_{103})$. Otherwise, $G_{101} \succ_1 G_{104} \succ_1 G_{103}$.

An important feature to note is that our party’s willingness to contribute is independent of its current vote share. The only things that matter are the discount rate, the change in next period’s vote share, and the effect of an insulated bureaucracy. Current vote share only affects the ability to contribute in the multi-party game and will be discussed in Section 2.4.2.

Figure 2.2 is a contour plot illustrating the relationship between $\theta$, $E[\kappa]$, and $\beta$ found in Equation 2.5. The figure demonstrates that the only regions for which $\theta$ is positive, i.e., our party is willing to give up some of its vote share, is when $E[\kappa] < 1$ and $\beta > 0$, i.e., where our party will lose power in the future and the insulated bureaucracy can help mitigate that effect. The darker areas of the plot indicate positive values of $\theta$ are to be expected (our party would be willing to give up $\theta$ amount of its vote share); this occurs where $\kappa$ is less than one, which means that the party expects future vote share to decrease. There is then a greater willingness to allocate contemporary resources

17I make the simplifying assumption that the absence of an arc is equivalent to an arc with intensity zero. See Page & Wooders (2007b) for the potential pitfalls of this assumption.

18One can contend that the loss of incumbency would alter behavior, which is contingent on current vote share. In this model, this effect would already be factored into the size of $E[\kappa_d]$; the loss of incumbency removes incumbency effects, which would lead to less support in the future (a smaller $E[\kappa_d]$). Therefore, all of the information for parties on the border in a majoritarian system is still captured in the value of $E[\kappa_d]$, not $v_d$. 38
to minimizing that future loss, which grows as future prospects look more grim ($\kappa$ approaches 0 but does not reach it)\textsuperscript{19} and as the benefits of an insulated bureaucracy grow ($\beta$ approaches an arbitrarily large value), which will help minimize the change in $\kappa$.

When either $\beta = 0$ or $E[\kappa] = 1$, our party will allocate no vote share to insulating the bureaucracy, and when $\beta > 0$ and $E[\kappa] > 1$, we would have to be compensated with a greater vote share in order for it to contribute to the insulation of the bureaucracy. This makes sense, since a party whose prospects tomorrow look at least as good as today’s is unlikely to minimize its potential growth. In Figure 2.2, as both $\beta$ and $\kappa$ increase, the colors become lighter, since the brighter a party’s future and the more powerful the effect of bureaucracy on that future vote share, the less likely the party will be to endorse bureaucratic insulation. \textsuperscript{20} The contour plot and discussion gives us the basis for our first testable hypothesis:

\textsuperscript{19}When $\kappa$ is 0, no amount of benefit from the bureaucracy can minimize the loss of vote share and the party is best served by keeping all of their present vote share.

\textsuperscript{20}I have not addressed the issue of uncertainty, which could be represented as confidence intervals around $E[\kappa]$. Intuition would indicate that as long as the confidence interval does not overlap with $\kappa = 1$, the analysis remains the same. Otherwise, parties may be willing to give up some vote share to further resolve this uncertainty. For a possible description, see Przeworski’s chapter in (O’Donnell & Schmitter 1986). An empirical example of factoring in uncertainty due to arbitrariness is Wei (1997).
Hypothesis 1a Regardless of party size, parties with diminished expected vote share are more willing to insulate bureaucratic agencies.

Hypothesis 1b An increase in the effect of bureaucratic insulation increases the probability of insulation only when parties expect to lose vote share; parties expecting to gain vote share become even less likely to insulate under the same increase in bureaucratic effect.

Both parts of the hypothesis are apparent from Figure 2.2. No matter how small our share of the power, if it looks like our party will lose that power in the future, we will want to do whatever it takes to minimize that loss of power, even if it costs our party something today. The size of the party only matters when it comes to our ability to enact our desired policy. For example, if our party controls the majority of the legislature, but our prospects at the next election look dim, we may be able to carry out bureaucratic institutional reform, whereas if we are a minor party with only 10% of the seat share, facing equally dim prospects, our party most likely do not possess enough political power to change our expected situation. Similarly, the more the bureaucracy is able to mitigate this change in political fortunes, the stronger our party’s desire to either insulate or prevent insulation (in the latter case, if we expect our prospects to be good).

2.4.2 Multi-Party Systems

While I outlined why our party may invest in insulating the bureaucracy, that investment does not make sense in the single-party environment, as there is no one to lose party share to besides isolated independent seats. Now, I introduce political competition in the form of other parties that may put our future political power at risk, i.e. what is commonly referred to as electoral risk (Kayser & Lindstadt 2015). In this case, think of political competition as the expectation (the most likely outcome) of a change in our vote/seat share, which in the game is modeled as $E[\kappa_d]$. Because every party values each seat equally (i.e. there is not diminishing marginal return), each party has an incentive to mitigate losses to their opponents, regardless of the level of control they exert over

\footnote{I am equating vote share with seat share for simplicity, which means that the elasticity between the two elements is neither particularly low (where a large change in vote share does not affect much seat share), nor high (where a small change in vote share has a large effect on seat allocation) (Chen & Rodden 2013). Though I do not do so, an interesting extension on this paper would be to modify this assumption when discussing the federalist systems, where malapportionment may have a much stronger effect on vote-seat elasticity.}
the political process. In many electoral systems, this makes sense as multi-party coalitions are often needed to form governments in Proportional Representation systems, and that these parties may form based on criteria besides Riker (1962)’s minimum winning coalition, particularly when there are more veto-players at hand (Tsebelis & Ha 2014). Single-Member District systems may also face the multiple veto player/point issue and thus want to gain more vote share than is necessary to achieve a plurality. For example, the Republicans in the U.S. Senate, while operating in a winner-take-all system, face a 50 or 51 seat rule to pass legislation (depending on the party of the Vice-President); a 60 seat cloture rule; and a 67 seat veto override, impeachment, rule suspension, and constitutional amendment rule. On top of these veto points, most parties rarely have complete party discipline, and thus prefer to have cushioning margins to their seat share. Thus, except for when parties have an extreme percentage of the seat share or in systems where there are very few veto players, it is not unreasonable to assume linear preferences.

Recall from the earlier discussion of the network above that in order to deal with vote/seat risk, each Party \( d \) is restricted to forming only one arc to the bureaucracy \( j_d(i_d, i_B) \) or not forming an arc at all; this means that parties do not send their vote share to another party, which is strictly dominated by providing their own vote share to the creation of an insulated bureaucracy. I also rule out the strictly dominated (or in network terminology, unstable) situations where the minimum vote share is not reached even though a coalition \( S \) of parties commits some of their own vote share \( j_d(i_d, i_B) \). The easiest way to relax this assumption is to add a probability parameter to Equation 2.4 (see the A). To conserve space, the payoffs table will use the shorthand of \( \{v_i(G_n), v_i'(G_n), \ldots\} \).

Table 2.4: Restricted Two-Party Networks

<table>
<thead>
<tr>
<th></th>
<th>( \hat{j}_1 )</th>
<th>( \hat{j}_2 )</th>
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<tbody>
<tr>
<td>( \hat{j}_2 )</td>
<td>( G_{201} )</td>
<td>( G_{202} )</td>
</tr>
<tr>
<td>( \hat{j}_1 )</td>
<td>( G_{203} )</td>
<td>( G_{204} )</td>
</tr>
</tbody>
</table>

Looking at the two-party network in Table 2.4 and the corresponding payoff Table 2.5, and using the analysis from the single party case, I evaluate when any given \( G \) will be Nash Stable. \( G_{201} \) will occur when either our party or the opposition may be capable of forming a link with \( i_B \).\(^{22}\)

\(^{22}\)In an infinite horizon case, a party or group of parties may use such action to signal their willingness to cooperate (see Section 2.5.4), but only if discounted future payoffs outweigh the contemporary loss and other parties cannot take advantage of the loss themselves.
(\(v^\ast\), the minimum level of power needed to insulate the bureaucracy, may exceed \(v_d\) for one of the parties) but are not willing to do so. In this case, \(\theta_d < v^\ast < v_d\). \(\theta_d\) may be low because the payoff to an insulated bureaucracy (\(\beta\)) is low or because the change in vote share \(\kappa_d\) for a given party is close to one. One can think of the Venezuelan case, where a pact existed in the two-party system to alternate between incumbency, which would leave both parties with an expected change in future vote share of one.

Another possibility for \(G_{201}\)'s stability is that the network could result from an extremely high cost to insulating the bureaucracy, such that no single party can implement reform, i.e. \(\theta_d < v_d < v^\ast\). This then leads to \(G_{204}\), where both parties contribute to insulating the bureaucracy at a cost of \(\theta_1 + \theta_2\), a proportion of both Party 1 and Party 2’s vote share (resp.). In order for this scenario to occur, both us and the opposition must expect to lose a reasonably large share of seats to isolates (un-aligned individuals) and expect an insulated bureaucracy to be able to mitigate the loss. Given the current configuration of the game and payoffs, this scenario is highly unlikely to unfold.\(^{23}\)

The stability conditions of \(G_{202}\) and \(G_{203}\) are much easier to interpret. In the first case, the opposition party expects their future vote share to diminish, \(E[\kappa_d] < 1\), and the party can at least

\(^{23}\)It is important to note that if uncertainty is a major factor for both parties, \(G_{204}\) becomes not so unlikely of an outcome. Alternatively, initial conditions matter (something may be Nash or farsightedly stable if the arcs already exist). Think about this in terms of Europe or colonial heritage: these states may have inherited semi-insulated bureaucracies from their authoritarian/monarchical origins, as in the case of Europe, or from colonizing powers, as in the case of African and Asia colonies where extraction was not the entire goal (Acemoglu, Aghion & Zilibotti 2006). In these cases, all parties may continue to adopt \(G_{204}\) as farsightedly stable, since neither party may be able to anticipate the changes to \(\kappa_d\) or to uncertainty if one or both parties move away.
Table 2.5: Payoffs for Restricted Feasible Two-Party Networks

<table>
<thead>
<tr>
<th>( j_1 )</th>
<th>( j_2 )</th>
<th>( j_2(i_2, i_B) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( v_1 + \delta E[\kappa_1]v_1 )</td>
<td>( v_1 + \delta E[\kappa_1] )</td>
<td>( v_1 + \delta E[\kappa_1] v_1 )</td>
</tr>
<tr>
<td>( v_2 + \delta E[\kappa_2]v_2 )</td>
<td>( (1 - \theta_2)v_2 + \delta E[\kappa_2] )</td>
<td>( (1 - \theta_2)v_2 + \delta E[\kappa_2] v_2 )</td>
</tr>
</tbody>
</table>

partially offset this loss because the benefit from an insulated bureaucracy, \( \beta \), is sufficiently large, which means they are willing to expend \( \theta_d \) amount of current vote share to insulate the bureaucracy \( v^* < \theta_d \). This also means the party has sufficient vote share \( v^* < v_d \) to overcome the minimum insulation cost. The same is then true for our party in network \( G_{203} \). The evaluation of all two-party networks demonstrates that, for a sufficiently high \( \beta \), \( G_{201} \prec_2 G_{202} \succeq G_{204} \) or \( G_{201} \prec_1 G_{203} \succeq G_{204} \), depending on which party’s expected change is less than 1.

The potential networks in a three-party system are laid out in Table 2.6 with payoffs in Table 2.7. Much of the stability analysis is repeated from the two-party case. \( G_{301} \) is functionally equivalent to \( G_{201} \), where either no party receives enough benefit from the bureaucracy to expend current vote on insulation, \( E[\kappa_d] \approx 1 \) for all parties, or the price of insulation \( v^* \) is too high for any coalition \( S \) of parties (in this case \(|S| \) can equal 1, 2, or 3) such that for all \( G' \neq G_{301}, G' \) is not feasible. Similarly, \( G_{308} \) can be understood in the same way as \( G_{204} \), where all parties contribute at some cost \( \theta_d \) to themselves, which under most conditions will be a dominated network for at least one party. The final similarity are those cases in which one party has the willingness and the vote share to insulate the bureaucracy itself: \( G_{302}, G_{303}, \) and \( G_{305} \). If one party has the willingness and the vote share to go it alone, while another party has the willingness, but not the vote share, the party with the lesser vote share will never contribute (not contributing would yield network \( G_{304}, G_{306}, \) or \( G_{307} \)), since the larger party has a strictly dominant strategy of contributing. Notice that the bureaucracy affects all parties, even those that are harmed by an insulated bureaucracy, i.e. parties that would gain vote share without the bureaucratic intervention.\(^\text{24}\)

The novel cases in the three-party system are those where coalitions are formed to insulate the bureaucracy: \( G_{304}, G_{306}, \) and \( G_{307} \). For ease of discussion, I use the case of \( G_{304} \), understanding

\(^{24}\text{An interesting extension would be to develop a “folk theorem” where the harmed players offer side payments to the offending party to not insulate the bureaucracy. This could perhaps be understood as changing other institutional structures or incentives, e.g. the constitution, rather than insulating the bureaucracy.}\)
Table 2.6: Restricted Three-Party Networks

<table>
<thead>
<tr>
<th>( j_1 )</th>
<th>( j_2 )</th>
<th>( j_3 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( G_{301} )</td>
<td>( G_{302} )</td>
<td>( G_{303} )</td>
</tr>
<tr>
<td>( j_1(i_1, i_B) )</td>
<td>( j_2(i_2, i_B) )</td>
<td>( j_3(i_3, i_B) )</td>
</tr>
</tbody>
</table>

that replacing one of the parties will generate the other two networks. In the case of \( G_{304} \), our party \((i_1)\) and one of the opposition parties \((i_2)\) both expect future vote share to decline and the return to bureaucratic insulation to be sufficient enough to warrant deferment of present vote share to insulate the bureaucracy. Notice that we may have the vote share necessary to overcome \( v^* \), but our party’s willingness to contribute \( \theta_d \) may not be greater than \( v^* \). This leaves us with two cases:

1. \( \theta_d > v^*, d = 1, 2 \): In this case, \( G_{304} \) is not Nash stable, as both parties have incentive to free ride the effort of the other party. Under Nash stability, expectations are to see cycling between \( G_{301}, G_{302}, G_{303}, \) and \( G_{304} \); essentially a variation on an anti-coordination game (e.g. chicken). However, one can easily see that under Farsighted stability conditions and a sufficiently large \( \beta \), both parties are likely to contribute, knowing that their lack of contribution may result in a lower payoff (i.e. \( G_{301} \)).

2. \( \theta_d < v^* < \theta_1 + \theta_2, d = 1, 2 \): In this case, \( G_{304} \) is both Nash and Farsightedly stable, since not contributing guarantees a lower payoff. How much we must contribute \((\theta_1)\), compared to Party 2 \((\theta_2)\) is unclear. Unlike minimum winning coalition games (Riker 1962), changing the composition of vote share from either party does not change the size or nature of the effect \( \beta \) of bureaucratic insulation. This leads to an inverse Nash bargaining game, where parties attempt to minimize cost, rather than increase reward. There are a good many Nash and Farsightedly stable solutions to the bargaining game, depending on the axiomatic assumptions one makes (Myerson 1991). For our purposes, it is enough to say that if \( G_{304} \) is observed, then we have at least achieved a Farsightedly stable solution.

While a four-party or more system is beyond the scope of this paper, we can see from Tables A.1 and A.2 in the Appendix that the cardinality of the cases covered in the three-party system is equal to that of a four-party system, noting that the size of coalitions will differ in the two systems. Thus, the analysis of unitary party systems (both two- and three-party) generates another
hypothesis concerning interactions in multi-party unitary states:

**Hypothesis 2a** In a multi-party system, at least one party will likely not contribute to insulating the bureaucracy.

**Hypothesis 2b** In a multi-party system, coalitions are likely to arise only when each coalition member’s willingness to contribute is less than the minimal cost to guarantee the insulation of the bureaucracy.

Again, the first part of this hypothesis is evident from Figures 2.2-2.4. Because of the zero-sum nature of vote share, if our party expects to lose power in the future, which will predispose us towards insulating the bureaucracy, at least one of the other parties will expect an increase in their vote share, which means that insulating the bureaucracy would dampen their expected gains, and
thus they would avoid contributing vote share to such a measure. The second part comes from the discussion the two coalition cases. If our party, as well as Party 2 are both expecting to lose vote share, and both parties have enough current vote share to insulate the bureaucracy, we fall into the familiar prisoner’s dilemma where \( G_{304} \) (where both our party and Party 2 contributes) is stable only under very restricted conditions; if our party is the only one with enough current vote share to insulate, then Party 2 can rationally assume that we will go it alone and will not contribute \( (G_{303}) \); if neither our party nor Party 2 have enough vote share to insulate alone, but can do so if we work together, then \( G_{304} \) becomes stable under a wider variety of conditions (though the exact contributions are not pinned down).

### 2.5 The Federalist State

#### 2.5.1 Identification

The previous section outlines how bureaucracies may be insulated in a unitary system, where our political party only has to compete at one level. In a federalist state, parties face multiple levels of competition and decision-making simultaneously. This section characterizes three mechanisms that parties may use to aggregate political decisions and competition from the provincial networks

<table>
<thead>
<tr>
<th>( \tilde{\partial}j_j )</th>
<th>( \tilde{\partial}j_{j_2} )</th>
<th>( \tilde{\partial}j_{j_3} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( j_1(i_1, i_B) )</td>
<td>( (1 - \theta_1)v_1 + \delta E[\kappa_1] v_1 )</td>
<td>( v_1 + \delta E[\kappa_1] v_1 )</td>
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<tr>
<td></td>
<td>( (1 - \theta_1)v_2 + \delta E[\kappa_2] v_1 )</td>
<td>( (1 - \theta_1)v_1 + \delta E[\kappa_1] v_1 )</td>
</tr>
<tr>
<td></td>
<td>( (1 - \theta_1)v_3 + \delta E[\kappa_3] v_1 )</td>
<td>( v_1 + \delta E[\kappa_1] v_1 )</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>( j_3(i_3, i_B) )</th>
<th>( \tilde{\partial}j_{j_2} )</th>
<th>( \tilde{\partial}j_{j_3} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( j_1(i_1, i_B) )</td>
<td>( (1 - \theta_1)v_1 + \delta E[\kappa_1] v_1 )</td>
<td>( v_1 + \delta E[\kappa_1] v_1 )</td>
</tr>
<tr>
<td></td>
<td>( (1 - \theta_1)v_2 + \delta E[\kappa_2] v_1 )</td>
<td>( (1 - \theta_1)v_1 + \delta E[\kappa_1] v_1 )</td>
</tr>
<tr>
<td></td>
<td>( (1 - \theta_1)v_3 + \delta E[\kappa_3] v_1 )</td>
<td>( v_1 + \delta E[\kappa_1] v_1 )</td>
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</table>
up to the national level. While this section adds an additional layer of interaction, the hypotheses from the unitary state section still apply to the provincial politics in a federal system.

From a formal institutions perspective (Riker 1964), a state, or more particularly, a constitution, is federalist if (a) at least two levels of government have overlapping jurisdiction over the same geographical area, (b) each level of government maintains some legally insulated action in at least one policy arena, and (c) the constitution and legal system help maintain these separate spheres. Riker (1964) then argues that the informal rules and norms, as well as the strategic interactions of political actors, shift the balance of power sharing amongst the national and provincial governments. He further argues that the reason federalist states and states with a large land area coincide is the fact that federalism is the only alternative to empire when it comes to governing large land masses with diverse groups of people. Thus, while there are still valid concerns regarding the comparison of large and small states, it is reasonable to assume that some of these differences have already been captured in the choice of political institution (i.e. federal or unitary), and thus still lend themselves to comparative political analysis.

I use the country of Argentina to illustrate various mechanisms through which federalism may influence bureaucratic insulation. Argentina is a federal republic with twenty-three provinces and an independent capital city of Buenos Aires (See Figure 2.5a).25 For this example, I temporarily ignore the actual empirical nature of political competition and instead sample from a semi-uniform distribution, with replacement, twenty-four of the networks defined above to create a supernetwork $G$ of political competition with regards to bureaucratic insulation (See Figure 2.5b).26 From this, I can discuss three hypothetical mechanisms through which federalism can work.

The easiest way of interpreting these supernetworks is by way of example using Figure 2.5: The Argentine province of Santa Cruz is identified within the supernetwork that represents the whole of Argentina as the network node of $G_{308}$ which means that the province has three parties competing and all parties allocate vote share to insulate the bureaucracy at the national level.27 In contrast,

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26 The distribution is uniform if the complete set of outcomes, including those where $i_B$ does not exist even though a party invests, is considered. This allows the simulated results to more likely reflect observed frequencies of bureaucratic insulation.
27 It is easy to see that a different model which includes subnational parties deciding on subnational bureaucratic structures would lead to modified outcomes from this game, particularly the findings of Hypothesis 5.
the neighboring province of Tierra del Fuego is a separate network node $G_{104}$ where there is one party that allocates vote share to bureaucratic insulation.

The three potential mechanisms of federalism addressed in this analysis are:

(a) Intra-party competition: the same party in different provinces would allocate different amounts of seat share to bureaucracy.

(b) Single-level inter-province competition: the stable network from the provincial competition receives the national level vote for that province.
(c) Dual-level inter-party competition: party actors play a multi-level simultaneous game at both the provincial and the national level.

Within the language of network formation games, these different mechanisms represent different link formation rules at the supernetwork level. Rather than dedicating the time to explore the 16 million potential supernetwork formations, I use the randomly generated supernetwork in Figure 2.5b and apply these three formation rules to develop hypotheses as to the effect of federalism on bureaucratic insulation.

2.5.2 Federalism as Intra-Party Competition

I begin analyzing competitions within parties by arguing that the provincial representatives in national parties have different interests when it comes to national level policies, based on local conditions. This is one of the main arguments for federalist systems: national territories are often too large to effectively represent local constituents or regional issues via a central government, and thus certain powers are devolved to the provinces to better resolve parochial problems. In this case, a given party may be prospering in a certain set of states, and thus be unwilling to insulate the bureaucracy, while that same party may be facing tough prospects in another set of provinces, and therefore be extremely interested in deferring some of their power to establishing an insulated bureaucracy. This section explores how internal competition within a party may resolve this dispute.

Besides the structure imposed by federalism, I make a few simplifying assumptions to analyze federal competition:

(i) The same parties exist between provincial governments; e.g. Party 1 in Buenos Aires is the same Party 1 in Formosa.

(ii) Electoral results in a province are similar\(^{28}\) both for the provincial government and representatives to the national government. Basically, this simplifies the parties’ modeling of the electoral process as a single future event instead of multiple distinct events.

\(^{28}\text{In this case, ‘similar’ means that differences in results/margins do not effect overall seat levels: If there are 10 seats total, winning 6 out of 10 versus 7 out of ten only matters if a } \frac{2}{3}\text{-vote is required, but not for a simple majority.}\)
(iii) Party preferences are consistent at both the provincial and the national level: Provincial party units that are (un)interested in bureaucratic insulation within their province are also (un)interested in a nationally insulated bureaucracy.\textsuperscript{29}

Without any further restrictions, this competition could look much like intra-party competition within a unitary state, assuming more than a single district. However, there are two key differences federalism can play in the decision process: provinces have already decided whether to insulate at their level of sovereignty (this will be better explored in Section 2.5.4) and, more importantly for this section, federalism is often accompanied by a malapportioned legislative body (generally an upper chamber), which is one of the main mechanisms of moderating the power of the central state against the provinces (Riker 1964). When that is the case, districts that would have imbalanced strength due to differing populations and size are accorded the same power in the federalist system, and thus in a nationalized party system (Chhibber & Kollman 2004).

I exploit this latter feature of federalism to model intra-party competition as a one-province, one-vote party system when it comes to changing bureaucratic institutions. Let $1_{i_d}(G)$ be an indicator function that takes the value of 1 if Party $d$ in network $G$ contributes to insulating the bureaucracy and 0 if it does not. Thus, $1_{i_1}(G_{408}) = 1$ indicates the presence of Party 1’s contribution to the insulation of the bureaucracy in network configuration $G_{408}$, whereas $1_{i_4}(G_{408}) = 0$ shows that Party 4 does not invest. Using this indicator function, I am able to then define the arcs in the supernetwork $G_d$ as $j \subset A : j_d(G, I_B)$ or $j_d(I_B, G)$ and $j_d = 1_{i_d}(G)$ for a given Party $d$ in network $G$. Figure 2.6 shows the arc-node formation $G$ (left side) as well as what that particular supernetwork formation would look like using the actual Argentine provinces (right side). I suggest that these individual party networks can be thought of as the development of a national level platform or agenda on bureaucratic insulation, based on the preferences of the province.

\textsuperscript{29}This assumption is relaxed when studying Mechanism (c).
Figure 2.6: Intra-Party Networks in the Argentina Simulation
Party 1 is the only truly national party on a geographic level, as it is present in every province (thus 24 nodes, see Figure 2.6a). In this simulation, the provinces that insulate the bureaucracy are geographically diverse, though this need not, and mostly does not, reflect reality. All told, there are eight provincial governments supporting insulation, which, again, given the malapportioned system, means that a third of the units would adopt insulation as part of the platform—nowhere near a majority. Thus, it seems likely that Party 1 will not adopt bureaucratic insulation as an actionable platform item.

Party 2 is present in nearly as many provinces as Party 1 (19, see Figure 2.6b); however, even fewer provinces (five) have insulated their bureaucracies, which leaves nearly three quarters of the provinces against adopting a national policy of bureaucratic insulation. Party 3 exists in slightly more than half of the provinces (13, see Figure 2.6c). Since eight of those provincial governments support bureaucratic insulation (roughly 60%), Party 3 will adopt insulation as part of their national agenda. Finally, Party 4’s supernetwork (see Figure 2.6d) consists of only six nodes, of which only one province supports bureaucratic insulation, thus ruling out national policy support. The analysis of these four party supernetworks produces

**Hypothesis 3** The greater the level of malapportionment in a political system, the less likely bureaucratic insulation reflects the underlying desire for reform.

Even though half of the provinces voted to insulated the national bureaucracy (see Figure 2.7), when individual parties are analyzed, only one of the four (Party 3) has a majority of provinces interested in forming a national bureaucracy. In a proportionally apportioned system, this may not be an issue, as Party 3 may be present and dominant in more populous states. However, in a malapportioned system, these differences are ruled out. In this case, the geographic size of the party plays a potential factor; for example, Party 1 and Party 3 have the same number of provincial parties insulating the bureaucracy (eight), however Party 1 is present in more geographic divisions (24 versus 13) and it takes more provinces to form a majority. Thus, in absolute terms, regional parties need fewer units to agree to insulating the bureaucracy in order to make it a part of their national-level platform. Obviously, this does not mean that smaller parties are more likely to adopt this platform: notice that Party 4 is much smaller, but only one of its provincial units is interested in insulation.
Note that the underlying distribution of likelihood of supporting insulation is evenly divided, with only one party supporting bureaucratic reform. However, the random sampling could just as easily have generated three parties in support of insulation, which would overstate the underlying level of support for reform. In either situation, malapportionment heightens minor differences. While this is a well-understood result of malapportionment in federalist systems, it demonstrates the ability of NFGs to illustrate known federal principles via a clear and simple mechanism.

2.5.3 Federalism as Single-Level Inter-Province Competition

In this section, instead of focusing on the competition between provincial units of a national party, I argue that the environment of the provincial-level may override party-level concerns. Thus, the provinces act as cohesive units, regardless of party affiliation, which then determine national institutional change via competition amongst themselves, e.g. Jujuy versus San Luis and Rio Negro versus Corrientes in the Argentine example. This could arise from an increased focus on constituency or pork-barrel politics, where the benefits from a particular policy or institutional change accrue to a subset of provinces. Alternatively, the winning coalition in a province may be precarious enough that secondary interests, such as those of the national party, are made subservient to reelection.

When dealing with inter-province competition, I replace assumption (iii) in Section 2.5.2 with:

(iii) \( v_S > v^* > v_C \), i.e. the bureaucracy can only be insulated if a coalition of parties \( S \) (or even one party) has both enough power to implement insulation and a controlling vote share, \( v_C \), at the provincial level.

In essence, this means that the outcome from the provincial unitary game represents the “one-vote” of that province in the federal system since that coalition has a controlling vote share \( v_C \). With these new assumptions, I then develop an indicator function \( 1_{i_B}(G) \), which takes the value of 1 if \( j_B \) exists in network \( G \); i.e. there exists a single party or coalition that dedicates enough vote share to insulate the bureaucracy that then provides insulation level \( j_B = \beta \). Otherwise, \( 1_{i_B}(G) \) equals 0 if \( j_B \) does not exist. Using this indicator function, I am able to then define the arcs in the supernetwork \( G \) as \( j \subset A : j_G(G,I_B) \) or \( j_G(I_B,G) \) and \( j_G = 1_{i_B}(G) \) for a given provincial

\(^{30}\)I use \( v_C \) to include a larger group of decision rules than simple majority, which would be \( v_C = 0.5 \).
network $G$ in supernetwork $G$. Figure 2.7 shows the arc-node formation $G$ (left side) as well as what that particular supernetwork formation would look like using the actual Argentine provinces (right side). In this case, only one supernetwork $G$ exists, where links are the preferences of a particular province, instead of multiple parties as in Figure 2.6.

Figure 2.7: Simulated Inter-Province Competition in Argentina

As mentioned in Section 2.5.3, Figure 2.7 shows that half (12) of the provinces adopt bureaucratic insulation. This obviously means that some form of tie-breaker would be required in a malapportioned upper chamber. This outcome or one very similar to it should come as no surprise: since the sampling occurred over a pseudo-uniform distribution and this formation rule essentially allows provincial networks $G$ to inform the supernetwork $G$, the final formation should generally reflect the distribution. The supernetwork decision rule (a tie-breaker, majority rule, supermajority, unanimity, etc.) then leaves individual provinces as the veto players, in contrast to Section 2.5.2 where first the provincial units within parties and then the parties themselves determine the

\[31\text{See footnote 26.}\]
outcomes.

The combined analysis in the previous two subsections leads the next hypothesis:

**Hypothesis 4a** The more similar the competitive environment provincial party units face, the more similar the federalist and unitary state outcomes.

**Hypothesis 4b** The weaker the national parties, the more likely national outcomes reflect provincial environments.

The first part of the hypothesis stems from comparing Section 2.5.2 to the analysis in the section, where the underlying political environment can more easily affect outcomes in inter-province competition (this subsection) than if the underlying level of support for bureaucratic insulation is filtered through both provincial and national party processes. As provincial environments converge, so does the inter-province and intra-party competitions mechanisms: the intra-party competition will eventually converge on identical action so that it ends up being party against party at the national level; the inter-province competition collapses down to equivalent competitions between each party in each province, which means that the outcome of any given province will predict the national bureaucratic reform outcome. The second part of the hypothesis is also based on comparing the two mechanisms of federalism: in this section, national parties are not able to force their provincial units to coordinate at the national level, and thus the difference in outcomes in these models are due to this change in the mechanism.

### 2.5.4 Federalism as Dual-Level Inter-Party Competition

Instead of the utility function found in Equation 2.3, party actors playing a dual-level game face a modified utility function that implements the two different arenas of provincial and national competition:

\[
\max_{v_d} u_d = (1 + \psi_d - \theta_d)v_d \\
+ \delta \left( E[\kappa_d]^{1 + \max[1, \sum_{n=1}^{n} \theta_d v_d \geq v_p, 0]} + E[\lambda_d]^{1 + \max[1, \sum_{n=1}^{n} \theta_d v_d \geq v_f, 0]} \cdot \psi_d \right) \cdot v_d \\
s.t. \{\delta, \theta_d\} \in [0, 1], \{\beta, \psi_d\} \in [0, \infty), \{\kappa_d, \lambda_d\} \geq 0|\kappa_d + \lambda_d \in [0, \frac{1}{v_d}].
\]
In order to simplify the analysis, I treat the seat share at the national and the provincial levels as interchangeable, with the national level adding an addition $\psi_d \cdot v_d$ to Party $d$'s original vote share $v_d$. $E[\lambda_d]$ represents the expected change in national level vote share for Party $d$ in province $G$. $\theta_d$ now represents not only the vote share set aside to satisfy insulating the provincial bureaucracy, but also to credibly commit the provincial party unit to a national level insulation course.

Consider two cases to compare the strategies of forming an arc (i.e. what are the sufficient values of $\beta$, $\kappa$, $\lambda$ for action) in Equation 2.3 to those in Equation 2.6. Note that $v^*_p$ in the above equation is the same as $v^*$ in the earlier analysis and that $\beta$ has the same effect on both provincial and national vote shares. Here, I distinguish between what would be the minimum amount of support needed at the province level (hence the $v^*_p$) and the minimum amount of vote share effort required to signal a desire at the federal/national level ($v^*_f$).

**Case 1** $v^*_p \leq v^*_f$ 

\[
(1 + \psi_d)v_d + \delta E[\kappa_d]v_d + \delta E[\lambda_d]v_d + \delta E[\lambda_d]\frac{1}{1+\beta}v_d + \delta E[\lambda_d]\frac{1}{1+\beta}\psi_d v_d \\
\theta \leq \delta (E[\kappa_d]\frac{1}{1+\beta} - E[\kappa_d]) + \delta \psi_d (E[\lambda_d]\frac{1}{1+\beta} - E[\lambda_d]).
\]

We then want to know how the result from Equation 2.8 compares with Equation 2.5; I compare the right hand sides, since both are greater than $\theta$.

\[
\delta (E[\kappa_d]\frac{1}{1+\beta} - E[\kappa_d]) \leq \delta (E[\kappa_d]\frac{1}{1+\beta} - E[\kappa_d]) + \delta \psi_d (E[\lambda_d]\frac{1}{1+\beta} - E[\lambda_d]) \\
0 \leq \delta \psi_d (E[\lambda_d]\frac{1}{1+\beta} - E[\lambda_d]) \\
E[\lambda_d] \leq E[\lambda_d]\frac{1}{1+\beta}
\]

Based on the specification of the model, this inequality holds true only in the interval $E[\lambda_d] \in [0, 1]$. Thus, $\theta$ will be larger than $v^*_p$ only if Party $d$ expects losses on the national level as well.
Case 2 $v_p^* > v_f^*$

\[
(1 + \psi_d)v_d + \delta E[\kappa_d]v_d + \delta E[\lambda_d]v_d \leq (1 + \psi_d - \theta)v_d + \delta E[\kappa_d]v_d + \delta E[\lambda_d]^{1+\beta} \psi_d v_d \tag{2.9}
\]

\[
\theta \leq \delta \psi_d (E[\lambda_d]^{1+\beta} - E[\lambda_d]). \tag{2.10}
\]

Equation 2.10 is essentially the same as Equation 2.5, except with reference to $\lambda$ instead of $\kappa$ and it also includes the $\psi_d$ modifier. The idea here is that Party $d$ may be willing to give up some current vote share, even if they do not receive the benefits of the insulated bureaucracy in their province, in order to send a substantive signal to the national arena (depending on how much they value national level power, $\psi_d$).

A simple way of understanding what happens in these cases is to return to the discussion of the one-party system in Section 2.4.1. There, Table 2.2 and Figure 2.1 contain all one party networks, including those where $i_B$ does not exist, even though $i_1$ sent vote share $j_1$ to insulate. This is network formation $G_{103}$. What this section argues is that $G_{103}$ and similar formations for multi-party systems may be Nash or Farsightedly stable if the intensity of $j_1$, i.e. $\theta_1$, is greater than some minimum signal threshold $v_f^*$ at the national level. The unrestricted feasible party network tables and graphs would be twice the size of the current restricted formation networks. Allowing for these additional $G$ networks in the Argentine simulation network $G$ would allow the different rules presented in Section 2.5.2 to create a supernetwork where the provincial government may not insulate the bureaucracy, but the parties from those provinces affect the party agenda concerning the bureaucracy. Thus, the final hypothesis:

**Hypothesis 5** Subnational party units may be willing to use their vote share as a credible signal of their desire for an insulated bureaucracy at the national level.

### 2.5.5 Unitary vs. Federalism

How do the unitary and the federalist networks compare in terms of likelihood of bureaucratic insulation? Both settings require a dominant political party to be in decline (Section 2.4.1). On the one hand, insulation is more likely in federalist states where locally dominant but at-risk party units can affect national-level agendas. Conversely, bureaucratic insulation is less likely in federalist
states where the dominant provincial parties do not face electoral risk and can affect the national institutional structure through their parties. This point primarily reflects the additional veto points found in federalist regimes.

However, action based on preference formation nuances this veto point argument. Comparing Equation 2.5 with Equations 2.8 and 2.10 shows that while there is only one factor in the unitary state \((\kappa)\), the federalist regime may have competition at either the provincial \((\kappa)\) or the national \((\lambda)\) level, or both. Thus, parties may be able to strategically influence either arena to increase the probability of insulating the bureaucracy. The vice versa is also true, using these same equations: if the dominant party in a unitary regime is facing political competition and is likely to insulate the bureaucracy, the same party in a federalist regime may become less likely if either the national or provincial situation is different (e.g. the party is doing well at the national level, even when facing risk in a particular province).

### 2.6 Conclusion

In this paper, I have used network formation games to assess the impact of political competition and federalism on the development of bureaucratic political insulation. I have shown that political parties facing an expected loss of governing power are more likely to insulate the bureaucracy, if the bureaucracy can mitigate against some of those losses (H1a). These losing parties are willing to give up even more of their contemporary political power the greater the benefit of insulated bureaucracy (H1b). There may even be multiple parties that expect losses, but the conditions for cooperation are limited (H2b). Because of the zero sum nature of electoral competition and the fact that an insulated bureaucracy would moderate the gains of the party gaining governing power, there will always be one party unwilling to legislate bureaucratic insulation (H2a).

Once federalism is introduced as a network of provincial political competitions, I show several mechanisms that may create “holdout” situations either for or against bureaucratic insulation. First, the malapportionment of provincial voting rights (one-district, one-member) can distort the underlying desire for, and thus likelihood of, bureaucratic insulation (H3). Second, the strength of the national political elites as well as the (dis)similarity of provincial political environments can create a multiple veto-point situation for national party agendas concerning bureaucratic insulation.
(H4). Third, provincial party units may sacrifice some of their provincial political power to signal to the national-level party their desire for bureaucratic insulation (H5).

Taking these hypotheses and the discussion from Section 2.5.5 seriously, I modify the theory of Table 2.1 to include more nuance when it comes to the likelihood of adopting bureaucratic insulation.

Table 2.8: Revised Theoretical Overview

<table>
<thead>
<tr>
<th>Level of Party Competition</th>
<th>Type of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal State</td>
<td>Unitary State</td>
</tr>
<tr>
<td>Low Competition: All levels</td>
<td>Most Unlikely</td>
</tr>
<tr>
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<td>Slightly Unlikely</td>
</tr>
<tr>
<td>High Competition: One level</td>
<td>Slightly Likely</td>
</tr>
<tr>
<td>High Competition: All levels</td>
<td>Most Likely</td>
</tr>
</tbody>
</table>

The difference from Table 2.1 to Table 2.8 are due to veto-points suggested in Section 2.5.2. Let us again assume we are the elites from a provincial unit of Party 1. If we do not face much competition, there is little electoral risk and our party is unlikely to support insulating the bureaucracy. If this is the same situation throughout most of the country, our province can form a coalition with the other provincial Party 1 units and use our malapportionment to defeat insulation motions. However, if there are other political parties at the national level that do not exhibit political environments similar to our own, these neighboring regions may force the national party to become more likely to support extensive bureaucratic insulation. The vice-versa is true as well: if our party faces a lot of competition, we will try to use the bureaucracy to mitigate our losses. If we are one of the only provincial units that face this situation, our desire for national level insulation will be quashed. However, the more competitive more regions become, the more likely we can form a coalition to force our national party to adopt bureaucratic insulation as a platform. Moreover, our party at the national level may not have enough vote share to enact our preferred institutional reform, but federalism also provides the power for provincial units to defect from their party’s platform, thus making the extreme outcomes improbable.

Throughout this paper, I have used network formation games (NFGs) as a new way of thinking about intra- and inter- party dynamics to generate the five testable hypotheses. NFGs create a simple modeling environment that is easy to understand both mathematically and visually. Not only...
does the NFG in this paper logically test the theoretical constructs of a social scientific model, but also creates an easy means of statistically modeling each of these dynamics: Rather than simulating a possible supernetwork in places like Argentina, researchers can use electoral information (as well as other political information) to create an empirical supernetwork with specified parameters to test the hypotheses within states over a time period and across states with different regimes.

Further research is needed in the use of network formation games as a tool for developing organizational theories of public bureaucratic environments, insulation, autonomy, and action. These formal models need empirical testing on the causes of bureaucratic insulation, as well as how insulated bureaucracies interact with political agents and other institutions to affect good governance. This particular game lends itself to several natural extensions: First, rather than only being allowed to send an arc to a general bureaucracy, the network can be modified to contain a menu of different bureaucratic institutions. This would dovetail nicely into Carpenter (2001a), in which Carpenter shows that certain US federal agencies are able to receive further insulation/autonomy from elected officials by providing expertise and legitimacy, while other agencies fail to gain autonomy. The menu approach also allows different states to focus on protecting bureaucratic areas that serve them particularly well (pockets of excellence), as well as throw other areas under the bus. Alternatively, bureaucratic insulation itself could be one among a menu of many potential institutional and policy reforms from which parties can choose to spend their vote share.

Second, an NFG can model the same information, but also include uncertainty (the variance of expected vote share) in the utility function. Parties may be willing to give up vote share in order to reduce uncertainty, even if their expectation of the mean is an increase in vote share. Third, we could explicitly combine an overlapping generations model with the NFG: Instead of a one-time investment, the decision to insulate is ultimately a decision to continue or build on the policies of previous generations. In this model, current party actors are linked through time to both their predecessors and successors, such as would be found in a strategic (T)ERGM model. Finally, a more critical assessment of diminishing marginal utility of vote share past $v_C$ is in order, to see the effects of critical points ($\frac{1}{2}$ or $\frac{2}{3}$ in most situations) on Figure 2.2.

This paper links both political competition and political institutions with bureaucratic insulation, answering Moe (1995)'s call for more positive theory on public bureaucracy. Insulation is an important first step in bureaucratic institutional development to create expertise and legitimacy,
which helps the state accomplish its goals and provide goods/services to its citizenry (Meier & Bohle 2007). Agencies lacking insulation require a friendly political environment to thrive and are much more susceptible to changes in the balance of power amongst political opponents. Thus, stable political consolidation and economic development rest on establishing insulated and competent bureaucracies.
CHAPTER 3
MECHANISMS OF MERIT: A COMPARATIVE INVESTIGATION OF THE CAUSES OF INCREASED BUREAUCRATIC INSULATION

In this chapter, I hypothesize that varying levels of political competition, together with whether a state is federal or unitary, affect the likelihood that regimes will develop insulated agencies. I compare the institutional arrangements of states with only a sovereign central government to those where sovereignty is split between subnational and national governments as well as several measures of political party competition and consolidation. Testing the boundaries of these theoretical levers, political competition and federalism, on a cross-national panel of 144 countries from 1980-2017, by employing contingency tables, ordered logit models, and two different potential outcomes matching models, I find effects of federal/unitary structure, party organizational status, or political competition on insulation, while the interaction effects hypothesized are more complex.

3.1 Introduction

Insulation is a foundational component in the development of bureaucracies capable of governing the modern welfare state. The ability to make key personnel decisions, e.g. hiring, firing, promotion, and compensation, without the interference of political actors allows policy decisions to be removed from the particularistic interests of nepotistic and clientelistic systems and embrace programmatic policy solutions which may target particular populations based on their characteristics (e.g., age, health, socio-economic status) but not particular people as proper nouns (e.g. the Argentine Confederación General Del Trabajo or the Gambino family of New York City). Moreover, continued insulation over time allows state agencies to develop expertise in the administration of policy, to make credible policy commitments, and develop an internal sense of mission.

Based on the game theoretic findings in Chapter 2, I argued that the interaction between political competition and federal/unitary states affects the likelihood that regimes will adopt insulating
policies. The core argument is that political competition, specifically electoral risk, leads political actors to insulate bureaucracies as a means of removing resources from potential political opponents should the current government lose, as well as provide a mechanism to maintain support for current political goals even outside of office. The opposing party may well attempt to reverse this institution-building, but they then risk the loss of political capital as well as their potentially limited time as agenda-setters (for example, the 2017 Republican attempt to repeal/replace the Affordable Care Act). Thus, the cost of relinquishing discretionary power today can be overcome by the benefits of policy continuity. The structure of national and subnational politics, whether federal or unitary, then dictates where these political games are played.

There are few studies on bureaucratic development despite its importance,\(^1\) thus this project makes several contributions: First, it begins to fill gaps in the literature on democracy/democratic consolidation (O’Donnell & Schmitter 1986, O’Donnell 1994) and the welfare state (Haggard & Kaufman 2008, Huber & Stephens 2012). Second, it addresses public policy debates on discretion (Fiorina 1989, Parker 1992, Epstein & O’Halloran 1999, Huber & Shipan 2002) and insulation (Wilson 1989, Carpenter 2001a), rooted in studies of US policymaking. Third, it complements the Latin American institutional development literature (Levitsky & Murillo 2005, Spiller & Tommasi 2007). Finally, it has important policy implications for practitioners interested in improving the delivery of government services in less developed countries.

In the next section, I quickly review pertinent existing literature on bureaucratic insulation, political competition, and federalism. In Section 3.3, I develop my hypothesis in the form of Tables 3.1 and 3.2, and then outline the statistical methods and data I will use to address the theoretical concern. Sections 3.4 displays the empirical results of testing the effects of federalism and competition on insulation. Finally, Section 3.5 concludes with a discussion of the evidence as well as a future research agenda.

\(^1\)For exceptions, see the literature review. However, note that many of these are either US based or focus on a particular type of institution, e.g., central and economic development banks.
3.2 Literature Review

Autonomy, Insulation, and Merit

Bureaucratic insulation is the loosening or lack of political influence by elected officials over government organizations, within the constraints of a broader political system.\(^2\) This does not mean that these government organizations are able to do whatever they so choose without constraint (Carpenter 2001\(^a\)). In fact, the constraints on government bureaucracies may in fact be their defining characteristics (Wilson 1989). Nevertheless, insulation does mean that these constraints are not so overwhelming as to preclude choice by bureaucratic agents, even sometimes against the will of other political actors.

Insulation can aide in the development of both institutional capacity and legitimacy, the core components to bureaucratic autonomy. Evans (1989) finds that states where the bureaucracy is able to develop based on merit and internal identity are more likely to be efficacious in their industrial interventions. Willis (1995) demonstrates that the independence of the National Economic Development Bank of Brazil is largely due to their ability to control their recruitment and loan decisions. Conversely, in states where there is little insulation, bureaucrats fail to invest in capacity as there is little incentive to do so (Mueller 2015). Legitimacy is then gained by providing better institutional services and building networks with both government and professional actors (Dimaggio & Powell 1983, Jeong, Miller & Sobel 2009).

Political Competition

Political competition plays a crucial role in the development of both democracies and bureaucratic development. Political competition forces parties to act strategically with regards to both the electorate and opposing parties (Kitschelt & Wilkinson 2007, Hellwig 2012). For example, Murillo (2009) finds that political parties in Argentina, Chile, and Mexico, in order to insulate themselves from competition, adopted different strategies during the Washington Consensus Era when it came to the privatization of public utilities (telecom and electricity), depending on the alternatives opposition parties presented to voters. Without political competition, parties have

\(^2\) See Reenock & Gerber (2008) for a discussion of the potential to insulate bureaucracies from outside interests groups.
greater incentive to focus on core constituents and the provision of resources to the selectorate, the elites from whom the political leadership is chosen and also the group that makes that decision (Helmke & Levitsky 2006, Haggard & Kaufman 2008). Competition creates a mechanism through which policies are refined to represent local political actors, institutions, and culture (Lijphart 1977, Lijphart 2012). Competitive political systems induce greater voter turnout, which in turn may force political parties to adopt more liberal policy outcomes (Holbrook & Vandunk 1993). Democratic competition keeps political elites from “taking their ball and going home;” for example, using the military to threaten populist elites into particular actions or to enforce informal power sharing, or to expropriate resources when facing electoral loss (Przeworski 2010).

I focus on a particular type of political competition, electoral risk, as the likelihood of the current governing coalition losing its governing status in the next election. At low or high levels of risk, elected officials and parties are less likely to be responsive to both the electorate and other challenging parties because a response is unlikely to change the outcome: at low levels, because there is no real threat to their position; at high levels, because the threat is large enough that no change in policy is likely to alter the outcome of an election, the party is doomed. Thus, political competition is likely to exact institutional or policy change when a response by the government may affect the outcome of an election (moderate levels of risk).

**Federalism**

From a formal institutions perspective (Riker 1964), a state, or more particularly, a constitution, is federalist if (a) at least two levels of government have overlapping jurisdiction over the same geographical area, (b) each level of government maintains some legal insulated action in at least one policy arena, and (c) the constitution and legal system help maintain these separate spheres. Riker (1964) argues that the informal rules and norms, as well as the strategic interactions of political actors, shift the balance of power sharing amongst the national and subnational governments. He further argues that the reason federalist states and states with large land area coincide is the fact that federalism is the only alternative to empire when it comes to governing large land masses

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3 Nooruddin & Simmons (2015) argue that this expanded voter turnout and greater probability of liberal policy outcomes forces the Indian government to give autonomy to agencies to carry out these policies. This is entirely consistent with one of the arguments for the development of autonomy presented below.

4 This is a slightly generalized version of Kayser & Lindstadt (2015), who focus on parliaments in advanced democracies.
with diverse groups of people. Thus, while there are still valid concerns regarding the comparison
of large and small states, it is reasonable to assume that some of these differences have already
been captured in the choice of political institution, and thus still lend themselves to comparative
political analysis.

Wibbels (2005) presents a thorough overview of the potential strengths and weaknesses of a fed-
eralist system from which there are several key takeaways: First, federal states have the ability to
react to local politics (cross-cutting cleavages) while providing the scale necessary for public goods
(Tiebout 1956). Second, local (subnational) governments can provide a check on federal government
encroachment into citizen’s lives. Third, federal governments provide a mechanism through which
the government has higher levels of contact with the electorate and thus can be disciplined more
easily (Peterson 1995, Weingast 1995). Fourth, the structure of the federal system affects the for-
mation of national party systems (Chhibber & Kollman 2004). Fifth, besides the issues mentioned
concerning fiscal federalism, federalist systems face issues of policy congruence/coordination at the
different levels of government, which leads to the sixth and seventh takeaways, the misalignment of
incentives at multiple levels and the greater barriers to collective action problems (Wibbels 2005).

My argument rests on the tension between vertical and horizontal integration of parties. Riker
(1964) suggests that the number of vertically integrated parties has a strong effect on the ability for
a federal system to not stray towards confederation or unitary political structures. Rodden (2006)
argues that if national parties can discipline their subnational units, it is easier for the central
government to implement a coherent, unified policy agenda (see also Bertelli & John (2010)).
Chhibber & Kollman (2004) argue that as authority becomes, or at least appears to become, more
centralized, voters are incentivized to form and support national parties to address the issues that
are relevant to them. Filippov, Ordeshook & Shvetsova (2004) take this a step further by asserting
that party systems are the mechanism through which federalism can become self-sustaining, as
they, coupled with constitutional structures, provide the institutions necessary for self-interested
parties to maintain stability, rather than allowing political conflicts at lower levels of negation to
overwhelm the process.
3.3 Theory and Methods

Hypothesis

In Chapter 2, I focused on federalism and party structure in the emergence of bureaucratic insulation (see Table 3.1). Using a formal model, I argue that a federalist state with low levels of competition is more likely to have some level of bureaucratic insulation than a unitary state with similar levels of competition, as the federalist structure allows different states to create insulated local bureaucracies or to offer subnational sovereign support for national bureaucracies, leading to “pockets of excellence” (Geddes 1994), whereas in a unitary state with similarly low levels of competition, there are fewer loopholes through which to form bureaucratic insulation; thus the unitary state has the lowest likelihood of developing an insulated bureaucracy.

Table 3.1: Likelihood of Extensive Bureaucratic Insulation at the National Level

<table>
<thead>
<tr>
<th>Level of Party Competition</th>
<th>Outcome: Likelihood of Extensive Bureaucratic Insulation at the National Level</th>
<th>Type of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Competition: All levels</td>
<td>Most Unlikely</td>
<td>Federal State</td>
</tr>
<tr>
<td>Low Competition: One level</td>
<td>Slightly Unlikely</td>
<td></td>
</tr>
<tr>
<td>High Competition: One level</td>
<td>Slightly Likely</td>
<td></td>
</tr>
<tr>
<td>High Competition: All levels</td>
<td>Most Likely</td>
<td>Unitary State</td>
</tr>
</tbody>
</table>

On the other hand, high levels of political competition in a unitary state make it more likely to see extensive bureaucratic insulation, whereas the same structures that allowed non-competitive federalist states to create pockets of excellence also allow highly competitive states to possess regional hold-outs for spoils-based bureaucratic structures, since high levels of competition would have to exist in each state in order for subnational political elites to adhere to national policy levels. The U.S. is a perfect example, where many states that have noncompetitive elections (whether Democrat or Republic) are more likely to exhibit machine politics/partisan tendencies in the bureaucracy, while the national government has granted much higher levels of insulation to the federal bureaucracies (Ringquist 1993, Jeong, Miller & Sobel 2009). Hence, unitary states represent both extremes of bureaucratic insulation, depending on the level of competition within the party system.

What the game theory makes clear is that the likelihood is also conditioned on the local level
of competition in federal states (Chhibber & Kollman 2004). If most provinces (subnational units) lack local level competition, the majority of provinces can form coalitions to suppress insulation motions. However, the more provinces that face pressures to insulate because of electoral risk, the more likely national-level bureaucracy will reflect the subnational trends.

The coarse nature of the data in the next section makes testing the hypotheses in Table 3.1 unlikely. Thus, I focus on testing the hypotheses in Table 3.2, where there is a solid foundation for a more complex argument with more granular data (Green & Shapiro 1994).

Table 3.2: Simplified Outcomes Table for Immediate Empirical Testing

<table>
<thead>
<tr>
<th>Outcome: Likelihood of Extensive Bureaucratic Insulation at the National Level</th>
<th>Type of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Party Competition</td>
<td>Federal State</td>
</tr>
<tr>
<td>Low Competition</td>
<td>Unlikely</td>
</tr>
<tr>
<td>High Competition</td>
<td>Likely</td>
</tr>
</tbody>
</table>

Empirical Methods

To test this likelihood (Section 3.4), I take a multi-method empirical approach using contingency tables, ordered logit models, and outcome matching. Each method allows me to look at a different aspect of the theory: Contingency tables allow researchers to look closely at the interaction between different theoretical variables even in small sample sizes and whether statistically significant relationships exist between the observed counts of variables. Ordered logit models can be thought of as an extension of an N-way contingency table, but where the explanatory variables do not have to be categorical. This approach allows us to bring in more continuous control or alternative hypothesis variables and also provide a point estimate on effects. The potential outcomes model takes the analysis a step further and attempts to replicate a randomized control trial environment to find the true average effect of our "treatment" variables—federalism and political competition—on bureaucratic insulation. In what follows, I explain each method and its capabilities in more detail.

I begin by employing two-way contingency tables to look at the effects of variables of interest on different levels of insulation (Agresti 2013). Contingency tables provide evidence of statistical relationships in environments with small sample sizes or when particular pairs of variables appear

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5 All statistical testing takes place in R version 3.6.1 or Stata 15. Data and code are available upon request.
infrequently, both of which describe the data challenges of this analysis. Contingency tables show which explanatory variables contribute the greatest effect to our variable of interest, but do not provide a traditional point estimate typically associated with regression models.

Ordered logit models (Long 1997, Long & Freese 2014) verify the findings of the contingency tables. This both indicates the level of effect via a coefficient, as well as provides evidence of effect size of our explanatory variables of interest in the presence of other explanatory control variables. One of the drawbacks with the structure of the data and the smaller data size is that the number of control variables must remain limited and thus the results of the regression analysis are not robust to most alternative specifications.\(^6\)

In an attempt to mitigate this issue, I utilize a supervised step-wise regression for the control variables, where I optimize across the Akaike Information Criteria (AIC), the Schwartz-Bayes Information Criteria (BIC), the Wald test, and the number of observations (independent of the information criteria). After finding the best fitting model, I then include explanatory variables of interest as well as variables that corroborate alternative hypotheses.\(^7\)

Finally, potential outcomes matching evaluates the variables of interest in a pseudo-trial environment (Rubin 2005). In a matching exercise, the methods employed are attempting to deal with the observational nature of most social science data by finding control units (e.g., country-years in a unitary state with low competition) that are similar to the treated (e.g., country-years in a federal state with low competition). These methods then rule out bias introduced by variables that are over/under-represented in the treatment group compared to the control. This method offers evidence on the effect of the explanatory variables on the outcome variables as a means of determining the robustness of the result. The two forms of matching are augmented inverse-probability weighting (AIPW) and regression adjustment (RA), both of which allow for a multi-valued treatment

---

\(^6\)This is true in both directions: occasionally adding a variable removes the statistical significance of a relationship and in different specifications, adding a new variable moves a previously tested variable that had not significance into statistical significance.

\(^7\)Variable selection is an ongoing issue in the social sciences, particularly when it comes to matching. This paper expands upon the stepwise approaches seen in Bingenheimer, Brennan & Earls (2005) and Cattaneo, Drukker & Holland (2013). The main expansion is by using more than one selection criteria simultaneously. The stepwise selection is performed using three techniques: (i) starting with the theoretically minimal model and adding variables based on their potential theoretical importance and their value in reducing the AIC and/or BIC without dramatically affecting the number of observations, (ii) starting with a broadly specified (kitchen sink) model, I eliminate variables based on their p-values, and then check for an improvement in AIC/BIC/Nobs, (iii) I begin with political control variables, then add in economic/demographic variables alphabetically. Once a variable improves the model, I return to the beginning of the variable list and retry all previous variables until all variables have been tested.
variable. Within the RA specification, I model the potential outcomes using robust, bootstrapped, and jackknifed standard errors, to give three checks on the model’s robustness. I use the results of the supervised stepwise regression mentioned above as a basis for the controlled matching variables.

The general model can be specified as:

\[
\text{Response} \sim \alpha + \beta_1 [Treatment] + \beta_2 [Controls] + \epsilon
\]

where the response is the degree of bureaucratic insulation from political processes, the treatment/explanatory variables are the institutional structure of unitary or federal states and the level of political competition, the control variables are political, economic, and geographic variables that both theoretically and empirically have an effect on the response variable. Thus, in most cases, the overall form of the ordered logit could be interpreted as

\[
\text{Insulation} \sim \alpha + \beta_1 [\text{fedtype} \times \text{political\_competition}] + \beta_2 \begin{bmatrix}
  fhi \\
  gdp\_growth \\
  gdp/capita
\end{bmatrix} + \epsilon
\]

I look at the pooled data through a panel or cross-sectional time series (CSTS) lens. The advantages of this approach are the ability to use the entire sample, even if some observations/states only exist for certain periods, as well as the ability to look at potential changes within the same state (e.g. Mexico becoming more electorally competitive throughout the time series). A given observation should be understood as a country-year, rather than just a state in a cross-sectional analysis or a period in a time series analysis.

**Response Variable: Bureaucratic Appointment Criteria**

The response variable, bureaucratic appointment criteria (BAC), is a single observation of repeated values taken from the most recent Varieties of Democracy dataset (Coppedge et al. (2019), hereafter referred to as VDEM (2019)). The explanatory variables are taken from multiple datasets including the World Bank *World Development Indicators* (2019), the Inter-American Development Bank’s Database of Political Institutions (Cruz, Keefer & Scartascini (2015), hereafter referred to as DPI
In VDEM (2019), country experts were asked “To what extent are appointment decisions in the state administration based on personal and political connections, as opposed to skills and merit?” The response variable is then operationalized as a low/mid/high categorical variable of a 1-5 Likert questionnaire where the categorical breakdown is 1-2 on the scale is ‘Mostly Political,’ 3 is ‘Mixed Political/Professional,’ and 4-5 is ‘Mostly Professional.’ Figure 3.1 plots the BAC for 2016, showing that the breakdown between levels is relatively even, with the fewest states possessing hiring/firing practices that are mostly based on skill and merit and the greatest number of states having closely mixed political and professional hiring/firing criteria.

**Treatment Variables: Political Competition and Federal/Unitary Structure**

The most immediate empirical test of political competition is the difference between the percentage of the vote received by the winning party and the opposition party(s), \(\textit{winning\_vote\_margin}\). Consistently large win margins over the course of a decade would suggest either the presence of a dominant party system or a lack of consolidation within the party system. However, both authoritarian electoral regimes and populist machines can manipulate outcomes to make elections appear to be competitive (via vote margin), without them being free, fair, or truly contestable (Levitsky

---

8In order to maximize the number of country-year observations to be compared, I first forward fill and then backward fill the political treatment and control variables with their most recent value.
In order to mitigate some of this potential, I create a factor variable \textit{f\_political\_competition} (see Appendix E) that combines \textit{winning\_vote\_margin} with the difference in the proportion of seats the government wins in an election and the proportion of seats won by the opposition party(s), \textit{winning\_seat\_margin}, regardless of the percentage of the vote that party receives. A higher \textit{winning\_seat\_margin} would, as above, indicate the presence of a dominant party system and or populist machine politics. Again, there may still be a lack of political competition with low government seat margins, but non-competitive regimes are more likely to maintain the semblance of competition by winning by a reasonable margin or engage in semi-fraudulent activity and then use legislative malapportionment in order to maintain their desired winning coalition (Snyder & Samuels 2001). Figure 3.2 shows each state’s winning seat margin in the lower house election closest to 2016. Win margins run the gamut from less than zero (here visualized in the ‘0 to 20’ category) to 100 percent. Notice also that there is a visual correlation between lower seat margins in Figure 3.2 and \textit{BAC} in Figure 3.1, which provides some preliminary support for political competition hypothesis.

A second factor variable \textit{f\_party\_status} is created to deal with a potential confounding electoral variable: the parties themselves. As parties must play their own internal political games amongst elites and supporters (Smyth 2006) and solve their own social choice problems (Kitschelt

\footnote{See Riker (1962) and Austen-Smith & Banks (1988) for discussion on the size/requirements of winning coalitions.}
& Smyth 2002), the level of party consolidation can affect democratic competition. To reflect this fact, \( f_{\text{party\_status}} \) blends the level of party permanence in a given state (\( \text{permanent\_party} \)) with the distinctiveness of party platforms (\( \text{party\_platforms} \)) and whether the party is clientelistic, collectivist, or programmatic (\( \text{party\_linkages} \)). As will be seen in the results, the consolidation of parties has both a direct and a mediating effect on \( BAC \) alongside political competition and institutional structure.

Figure 3.3: Watts 2003 Federal Classification Worldwide

Institutional structure (\( \text{fedtype} \)) is a simple binary variable that divides states into federal or unitary types based on the classification from Norris (2008). I attempted several other federalism specifications found in Norris (2015), but there were either too few observations (the administrative and political decentralization variables found in Schneider (2003)) and/or did not vary at all across the panel (Watts (2003)’s federalism measure, where the classification occurred during the first period of observations in the panel). While some of the theoretical nuances of federalism may be lost using a binary approach (e.g., non-linearity effects or variations within the same state between fiscal, administrative, and political federalism), it does help mitigate the small sample issue, as there are significantly fewer cases of federalism than unitary states throughout this period. In order to illustrate the significant variation in institutional regimes, Figure 3.3 maps Watts (2003)’s classification scheme.
Control Variables and Alternative Hypotheses

A wide range of political, economic, and demographic variables are tested to gauge the importance of their relationship with $BAC$, as well as to determine the breadth of the hypothesized association between political competition, federalism, and insulation. Political controls include a combined Freedom House Index score ($fhi$) as well as the combined Polity IV Score ($polity$). These variables speak to the overall political environment (e.g., rule of law, civil and political rights, political stability, etc.) rather than particular political institutions such as the party system or the bureaucracy.

Economic and demographic variables come from the World Bank’s *World Development Indicators* (2019). The key related variables from the WDI are year-year growth in gross domestic product ($gdp\_growth$); the GDP/capita, purchasing price parity, in constant US dollars ($gdpcapita\_ppp\_kd$) as a measure of overall wealth/development; the consumer price index percent rate of change ($cpi\_percent$) as a measure of inflation; the percentage of GDP from foreign direct investment ($fdi\_percent$) which is a proxy for a state’s exposure to foreign economic and political influence; claims on the central government as percent of GDP ($cgov\_claim\_pct$) as an indicator of the fiscal responsibility of the state; and the percent of GDP earned from oil exports ($oil\_percent$), a common control to sort out high income-low development states from high income-high development states. See Appendix B for the full list of tested control variables.

I test multiple alternative hypotheses against the proposed treatment and control variables. First, I check whether the structure of political competition, rather than the level, drives political actors to insulate public agents (Monroe & Rose 2002, Powell 2004, Kayser & Lindstadt 2015). I operationalize this by looking at a categorical variable of electoral systems ($electoral\_system$) as well as looking at the mean district magnitude of the lower house across states ($mdmh$). Second, I examine the influence of multiple veto points or institutional checks (Tsebelis 2000, Keefer & Stasavage 2002) on insulation, where an increased number of checks increases the credibility and stability of policy (Keefer & Stasavage 2003). Third, I assess whether the level of clientelism ($clientelism$) throughout the entire political system affects the $BAC$, while there may be issues with endogeneity and collinearity with this specification (Keefer 2007, Cruz & Keefer 2015, Stokes et al. 2013).
3.4 Results: The Effects on Insulation

3.4.1 Contingency Table Analysis

In Table 3.3, each of the three explanatory variables are compared against BAC and each other.\textsuperscript{10} The p-values for all two-way tables strongly reject the chance that the association between the variables is due to random chance.\textsuperscript{11} Sub-table 3.3a shows that states with non-competitive elections are significantly more likely to have a political BAC (918 observations versus 604 expected country-years) and symmetrically less likely to have a professional BAC (257 observations versus 592 expected). The reverse relationship can be seen with competitive states, though the association is proportionally less prominent. Sub-table 3.3b tests federal/unitary regimes against BAC, finding that federal regimes are much less likely than expected (41\%) to have political BAC and more likely to be professional. Sub-table 1c shows a similar pattern to Sub-table 3.3c, with states with unconsolidated parties more likely to have political BAC.\textsuperscript{12}

The last three sub-tables investigate the relationship between the explanatory variables. Sub-table 3.3d demonstrates the relationship between political competition and federal/unitary states. The main finding is that federal regimes are less likely to be non-competitive and more likely to be politically competitive than expected. We see a similar, though stronger relationship, between party status and federal/unitary type in Sub-table 3.3e. Finally, Sub-table 3.3f has greater-than-expected values along the diagonal, leading to a higher statistical correlation. This makes sense as these variables are at least obliquely related to each other from the factor transformation. Notice that while all of the significance tests suggest the underlying distributions are not randomly assigned, Cramer’s V, a measure similar to Pearson’s $\rho$ for nominal data, exceeds 0.3 only in Sub-tables 3.3a, 3.3c, and 3.3e, meaning that further results are likely to be weaker than the contingency tables would initially suggest.

Table 3.4 shows the interaction effect between political competition or party status and federal-

\textsuperscript{10}These binomial values are based on a discretization of the factor variables.
\textsuperscript{11}Throughout this paper, I use $p < 0.1$ as a statistically significant threshold, since the cluster sample size is small (144 countries) for the asymptotics. $p < .2$ are considered near significant. All p-values are reported for readers to make their own judgment on the rejection of the null.
\textsuperscript{12}NB: these charts already show issues with attempting to use large N processes with the data, as there are significantly fewer non-competitive/consolidated and professional BAC states, even with the pooled time series.
Table 3.3: Cross-Sectional Time Series Individual Contingency Tables

<table>
<thead>
<tr>
<th>a. Political Competition</th>
<th>Total</th>
<th>Total</th>
<th>b. Federal/Unitary State</th>
<th>Total</th>
<th>Total</th>
<th>c. Party Status</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Competitive</td>
<td>918</td>
<td>1696</td>
<td>Competitive</td>
<td>1374</td>
<td>1947</td>
<td>Unconsolidated</td>
<td>1372</td>
</tr>
<tr>
<td>Pol</td>
<td>603.9</td>
<td>1696</td>
<td></td>
<td>1383.1</td>
<td>1947</td>
<td>324</td>
<td>1696</td>
</tr>
<tr>
<td>BAC</td>
<td>1092.1</td>
<td>1696</td>
<td></td>
<td>563.6</td>
<td>1696</td>
<td>55.58%</td>
<td></td>
</tr>
<tr>
<td>29.74%</td>
<td>16.88%</td>
<td>46.21%</td>
<td></td>
<td>41.40%</td>
<td>58.28%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>921.9</td>
<td>2589</td>
<td></td>
<td>1921</td>
<td>2770</td>
<td>2589</td>
<td></td>
</tr>
<tr>
<td>Pol</td>
<td>1667.1</td>
<td>2589</td>
<td></td>
<td>1968.1</td>
<td>2770</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAC</td>
<td>0.09%</td>
<td>29.74%</td>
<td></td>
<td>1.80%</td>
<td>25.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof</td>
<td>1406</td>
<td>2589</td>
<td></td>
<td>618</td>
<td>2589</td>
<td>0.13%</td>
<td></td>
</tr>
<tr>
<td>Pol</td>
<td>1070.8</td>
<td>2589</td>
<td></td>
<td>741</td>
<td>2589</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAC</td>
<td>0.33%</td>
<td>0.09%</td>
<td></td>
<td>0.19%</td>
<td>0.13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2118</td>
<td>5948</td>
<td></td>
<td>4516</td>
<td>6356</td>
<td>2589</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3830</td>
<td></td>
<td></td>
<td>1840</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>64.39%</td>
<td></td>
<td></td>
<td>38.95%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>2118</td>
<td>5948</td>
<td></td>
<td>1840</td>
<td></td>
<td>5948</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3830</td>
<td></td>
<td></td>
<td>38.95%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>χ²: 549.035 Pr = 0.000, Fisher’s P: 0.000, Cramer’s V: 0.304</td>
<td>χ²: 155.750 Pr = 0.000, Fisher’s P: 0.000, Cramer’s V: 0.157</td>
<td>χ²: 1657.8 Pr = 0.000, Fisher’s P: 0.000, Cramer’s V: 0.528</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend: Observed/Expected/% Contribution to χ²/Contribution > 25%
ism. Sub-table 3.4a shows that there are very few non-competitive federal states with professional BAC.\textsuperscript{13} Contrast that with competitive federal states nearly twice than expected professional BAC observations and non-competitive unitary states 40% more than expected political BAC outcomes. Sub-table 3.4b has a similar trend to Sub-table 3.4a, but most of the unexpected results are confined to unconsolidated unitary states. Both sub-tables show statistically significant association, though party status and institutional regime interactions are the only one to exceed a Cramer V of 0.3.

Mosaic plots are a helpful visual method for illustrating the non-randomness of the relationship between the interaction of the explanatory variables and BAC. Unlike the two-way tables, these plots allow readers to access multiple dimensions/variables simultaneously. The entire rectangle is the entire sample of observations. It is then sub-divided into the characteristics of interest. In the case of Figure 3.4, it is first subdivided vertically by political competition (high vs low), with there being more states with high competition than low (in this sample). Both the high and the low competition rectangles are then further vertically subdivided by whether they are unitary or federal states (again, in this sample, most states are unitary, regardless of political competition or BAC). Finally, these rectangles are horizontally subdivided by level of BAC. The size of each rectangle represents the number of observations with a particular set of characteristics. In the case of Figure 3.4, the uppermost left bin are the observations for which political competition is low, the state is unitary, and the BAC is mostly political. Color represents how significantly larger (blue) or smaller (red) a bin is compared with what would be expected based on the observed margins; the darker the color, the more statistically significant.

In Figure 3.4, mostly political BAC states are over-represented (dark blow) in low competition-unitary states and under-represented (dark red) in both institutional regimes with high competition, compared to marginal expectations. There is a slightly statistically significant result for low competition-federal states having more mixed BAC outcomes than expected (light blue). High competition states are significantly more likely to be mostly professional than expected, and vice versa for low competition states, regardless of institutional regime. Notice that while the size of the rectangles change significantly between Figure 3.4 and Figure 3.5, the underlying relationships reflected in the interaction between political competition and institutional regimes remains the same.

\textsuperscript{13}This is important to keep in mind for the potential outcomes’ analysis, as the highly unbalanced nature of the table means that the control group (aka the support) will be small for certain comparisons, and thus the comparison table is not symmetric.
### Table 3.4: Cross-Sectional Time Series Interaction Contingency Tables

#### a. Political Competition × Federal/Unitary State

<table>
<thead>
<tr>
<th></th>
<th>Non-Competitive</th>
<th>Non-Competitive</th>
<th>Competitive</th>
<th>Competitive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unitary Federal</td>
<td>Unitary Federal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pol</td>
<td>720</td>
<td>171</td>
<td>617</td>
<td>149</td>
<td>1657</td>
</tr>
<tr>
<td></td>
<td>437.1</td>
<td>148.4</td>
<td>731.8</td>
<td>339.7</td>
<td>1657</td>
</tr>
<tr>
<td></td>
<td>25.94%</td>
<td>0.48%</td>
<td>2.55%</td>
<td>15.16%</td>
<td>44.13%</td>
</tr>
<tr>
<td>BAC</td>
<td>631</td>
<td>306</td>
<td>1137</td>
<td>494</td>
<td>2568</td>
</tr>
<tr>
<td></td>
<td>677.5</td>
<td>230.1</td>
<td>1134.1</td>
<td>526.4</td>
<td>2568</td>
</tr>
<tr>
<td></td>
<td>0.45%</td>
<td>3.56%</td>
<td>0.00%</td>
<td>0.28%</td>
<td>4.29%</td>
</tr>
<tr>
<td>Mixed</td>
<td>192</td>
<td>47</td>
<td>829</td>
<td>556</td>
<td>1624</td>
</tr>
<tr>
<td></td>
<td>428.4</td>
<td>145.5</td>
<td>717.2</td>
<td>332.9</td>
<td>1624</td>
</tr>
<tr>
<td></td>
<td>18.49%</td>
<td>9.45%</td>
<td>2.47%</td>
<td>21.18%</td>
<td>51.59%</td>
</tr>
<tr>
<td>Prof</td>
<td>118</td>
<td>62</td>
<td>903</td>
<td>541</td>
<td>1624</td>
</tr>
<tr>
<td></td>
<td>593.3</td>
<td>127.7</td>
<td>552.3</td>
<td>350.7</td>
<td>1624</td>
</tr>
<tr>
<td></td>
<td>22.79%</td>
<td>2.02%</td>
<td>13.33%</td>
<td>6.18%</td>
<td>44.32%</td>
</tr>
<tr>
<td>Total</td>
<td>1543</td>
<td>524</td>
<td>2583</td>
<td>1199</td>
<td>5849</td>
</tr>
<tr>
<td></td>
<td>2137</td>
<td>460</td>
<td>1989</td>
<td>1263</td>
<td>5849</td>
</tr>
<tr>
<td></td>
<td>44.87%</td>
<td>13.49%</td>
<td>35.72%</td>
<td>21.82%</td>
<td>100%</td>
</tr>
</tbody>
</table>

$\chi^2$: 705.840 Pr = 0.000, Cramer’s V: 0.246

#### b. Party Status × Federal/Unitary State

<table>
<thead>
<tr>
<th></th>
<th>Unconsolidated</th>
<th>Unconsolidated</th>
<th>Consolidated</th>
<th>Consolidated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unitary Federal</td>
<td>Unitary Federal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pol</td>
<td>1115</td>
<td>230</td>
<td>222</td>
<td>90</td>
<td>1657</td>
</tr>
<tr>
<td></td>
<td>605.4</td>
<td>130.3</td>
<td>563.5</td>
<td>357.8</td>
<td>1657</td>
</tr>
<tr>
<td></td>
<td>25.66%</td>
<td>4.57%</td>
<td>12.38%</td>
<td>11.99%</td>
<td>54.61%</td>
</tr>
<tr>
<td>BAC</td>
<td>904</td>
<td>168</td>
<td>864</td>
<td>632</td>
<td>2568</td>
</tr>
<tr>
<td></td>
<td>938.2</td>
<td>202</td>
<td>873.3</td>
<td>554.5</td>
<td>2568</td>
</tr>
<tr>
<td></td>
<td>0.08%</td>
<td>0.34%</td>
<td>0.01%</td>
<td>0.65%</td>
<td>1.07%</td>
</tr>
<tr>
<td>Mixed</td>
<td>118</td>
<td>62</td>
<td>903</td>
<td>541</td>
<td>1624</td>
</tr>
<tr>
<td></td>
<td>593.3</td>
<td>127.7</td>
<td>552.3</td>
<td>350.7</td>
<td>1624</td>
</tr>
<tr>
<td></td>
<td>22.79%</td>
<td>2.02%</td>
<td>13.33%</td>
<td>6.18%</td>
<td>44.32%</td>
</tr>
<tr>
<td>Prof</td>
<td>2137</td>
<td>460</td>
<td>1989</td>
<td>1263</td>
<td>5849</td>
</tr>
<tr>
<td></td>
<td>48.63%</td>
<td>6.93%</td>
<td>25.72%</td>
<td>18.82%</td>
<td>100%</td>
</tr>
</tbody>
</table>

$\chi^2$: 1671.2 Pr = 0.000, Cramer’s V: 0.378

Legend: **Observed**/Expected/% Contribution to $\chi^2$/ Contribution > 15%
with the party status and institutional regime interaction (with the exception of a slight pattern difference for mixed political/professional BAC states).

The results of the mosaic plots and contingency table analysis suggest that political competition and party status are the main factors in determining the type of BAC to expect. Non-competitive/consolidated regimes are significantly more likely to have BAC that are political, and competitive/consolidated regimes are significantly more likely than expected to have BAC that are professional. Based on Table 3.3a, federal states are more likely than expected to have experienced some measure of insulation, though that result is not as clearly identified in the mosaic plots. Similarly, evidence of the interaction effect hypothesized did not materialize in this analysis.

### 3.4.2 Ordered Logit Analysis

I next submit the response and explanatory variables to a battery of CSTS ordered logit models to test the strength of the contingency table findings, as well as explore what other variables offer some explanatory power in understanding BAC. The top of Table 3.5 presents the political and economic controls while the lower portion records the explanatory variables of interest. Of the control variables, higher levels of freedom/liberty (fhi), increased inflation (cpi_pct), more foreign direct
investment (fdi\_pct), and greater average income per person in a state (gdpcapita\_ppp\_kd) are statistically related to higher levels of insulation (professional BAC). Conversely, increased economic growth (gdp\_growth) and oil income (oil\_pct) are statistically related to lower levels of insulation; the former variable being an interesting and unexpected result, theoretically. One explanation is that states with professional BAC are already more highly developed and thus experience positive growth rates, though these rates are lower than those found in less developed/middle income countries. However, the positive effect of inflation offers a potential critique of this explanation. Alternatively, both of these variables may also have non-linear effects not captured by CSTS ordered logit (e.g. that moderate levels of inflation are good but extremes lead to unstable political outcomes)

Once these variables are accounted for, f\_party\_status is the only political variable to remain statistically significant, where a unit shift in all three underlying variables is 200% more likely to be at a higher insulation level. What is interesting is that while neither federalism nor political competition are statistically significant in the main effects, the interaction between the two is, suggesting that federal regimes with high levels of competition are ten times more likely to have professional BAC than non-competitive-unitary regimes. Moreover, this model fits the underlying
Table 3.5: Cross-Sectional Time Series Ordered Logit Model

<table>
<thead>
<tr>
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<tr>
<td>CPI Percent</td>
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<td>1.001</td>
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<td>1.001</td>
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<td>1.001</td>
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<td>FDI Percent</td>
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<td>0.009</td>
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<td>GDP Percent</td>
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<td>0.969</td>
<td>0.967</td>
<td>0.968</td>
<td>0.967</td>
<td>0.967</td>
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<td>GDP/ConstantUSD</td>
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<td>1.000</td>
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<td>1.000</td>
<td>1.000</td>
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<tr>
<td>Oil Percent</td>
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<td>0.921</td>
<td>0.920</td>
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<td>12.914</td>
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<td>Norris (2015)</td>
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<td>0.339</td>
<td>0.269</td>
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<td>Institutional</td>
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<td>Subnational Party</td>
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<td>Subnational Party</td>
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<td>Control - Low</td>
<td>0.187</td>
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<tr>
<td>Clientelism</td>
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<td>Party Status</td>
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</tbody>
</table>

Legend: Coefficient/P-value

Most alternative hypothesis models do not improve upon the fit of the baseline treatment model [4], though low levels of subnational party control are near significant and thus when model [8] is combined with model [4] in model [9], the fit improves and the uncertainty around the coefficients significantly shrinks. Thought not a true test of the theoretical model presented in Table 3.1, this result lends itself to the conclusion that the subnational political system is important for national level bureaucratic outcomes. The one alternative hypothesis model that clearly does better than the treatment model is [10], which includes the general level of clientelism in the political environment;
a unit increase in clientelism leads to a nearly 400% decrease in the likelihood of a state having professional BAC.

Including clientelism and \( f_{\text{party\_status}} \) in the treatment model gives us the full specification found in [12]. This full specification is the best fitting model, all the coefficient standard errors are significantly reduced (as evidenced by the decrease in p-values) except for \( f_{\text{party\_status}} \), and all the magnitudes remain similar to prior specifications. Recall that the supervised step-wise regression approach provides a conservative estimate on the significance of the explanatory and alternative hypothesis variables. In the end, none of the main effects of the explanatory variables support the suggested hypothesis; the one significant result, the interaction between political competition and federalism, would suggest that the state most likely to experience higher levels of insulation as represented by professional BAC would be competitive federal regimes.

### 3.4.3 Potential Outcome Matching Analysis

Table 3.6 presents a potential outcomes framework, where each state is matched based on the same control variables as in the regression analysis above and then the average treatment effects are reported along the diagonals. I repeat this process four times, holding each political competition/party status and federal/unitary interaction level constant as the control, and comparing with the other interaction levels. This displays the effect of each treatment level against every other treatment level, reported as a percent difference along the off-diagonal. For example, in Sub-table 3.6a, in the first row I hold non-competitive unitary as the control variable; the potential outcome mean (PoMean) is 2.089, which means that compared to the same model without non-competitive unitary states, when a non-competitive unitary state is present, the likelihood of having a mid- or high-level of insulation (mixed or professional BAC) is doubled. I then compare this outcome with the other interaction levels: 2.089 is approximately 12% lower than a matched state with a non-competitive federal regime, insignificantly different from a competitive unitary regime, and 11% lower than a matched state with a competitive federal regime. In order to ease interpretation, I have highlighted the values that are statistically significant (p-values in parentheses) in the Augmented Inverse Propensity Weighted (AIPW) and Regression Adjusted (RA) estimator models. The letter coding indicates how robust these statistical findings are to the other RA estimator models.
models (bootstrap and country jackknife).\textsuperscript{14}

\textsuperscript{14}The \textit{BAC} variable is split up as there is no multinomial or ordered logit specification for potential outcome matching models.
### Table 3.6: Potential Outcomes Analysis

#### Low vs Mid/High Insulation

<table>
<thead>
<tr>
<th>a. Political Competition</th>
<th>Non-Competitive</th>
<th>Non-Competitive</th>
<th>Competitive</th>
<th>Competitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unitary</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Federal</td>
<td></td>
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</tr>
<tr>
<td>PoMean</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Non-Competitive Unitary</td>
<td>2.089 (0.000) c</td>
<td>12% (0.001) c</td>
<td>0% (0.926) b</td>
<td>11% (0.000) c</td>
</tr>
<tr>
<td>Non-Competitive Federal</td>
<td>-11% (0.000) c</td>
<td>2.290 (0.112) c</td>
<td>-11% (0.000) a</td>
<td>-1% (0.750) c</td>
</tr>
<tr>
<td>Competitive Unitary</td>
<td>0% (0.926) b</td>
<td>13% (0.000) a</td>
<td>2.086 (0.000) c</td>
<td>12% (0.000) c</td>
</tr>
<tr>
<td>Competitive Federal</td>
<td>-10% (0.000) c</td>
<td>1% (0.752) b</td>
<td>-10% (0.000) c</td>
<td>2.271 (0.000) c</td>
</tr>
</tbody>
</table>

#### Comparison Group Percent Difference

<table>
<thead>
<tr>
<th>b. Party Status</th>
<th>Unconsolidated</th>
<th>Unconsolidated</th>
<th>Consolidated</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unitary</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Federal</td>
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</tr>
<tr>
<td>PoMean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unconsolidated Unitary</td>
<td>1.798 (0.000) c</td>
<td>13% (0.542) b</td>
<td>35% (0.000) a</td>
<td>47% (0.000) c</td>
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<tr>
<td>Unconsolidated Federal</td>
<td>-12% (0.490) a</td>
<td>1.943 (0.000) c</td>
<td>-19% (0.388) b</td>
<td>-1% (0.216) b</td>
</tr>
<tr>
<td>Competitive Unitary</td>
<td>-26% (0.000) c</td>
<td>-16% (0.000) b</td>
<td>2.203 (0.000) c</td>
<td>9% (0.002) a</td>
</tr>
<tr>
<td>Competitive Federal</td>
<td>-32% (0.000) c</td>
<td>-23% (0.109) a</td>
<td>-8% (0.001) a</td>
<td>2.364 (0.000) c</td>
</tr>
</tbody>
</table>

#### Low/Mid vs High Insulation

<table>
<thead>
<tr>
<th>a. Political Competition</th>
<th>Non-Competitive</th>
<th>Non-Competitive</th>
<th>Competitive</th>
<th>Competitive</th>
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</thead>
<tbody>
<tr>
<td>Unitary</td>
<td></td>
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<tr>
<td>Federal</td>
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</tr>
<tr>
<td>PoMean</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Non-Competitive Unitary</td>
<td>1.421 (0.000) c</td>
<td>-31% (0.864) c</td>
<td>-14% (0.002)</td>
<td>0% (0.994) b</td>
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<tr>
<td>Non-Competitive Federal</td>
<td>68% (0.986) c</td>
<td>1.231 (0.966) b</td>
<td>45% (0.990) c</td>
<td>70% (0.986) b</td>
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<tr>
<td>Competitive Unitary</td>
<td>14% (0.021) a</td>
<td>-21% (0.000) a</td>
<td>1.355 (0.000) c</td>
<td>16% (0.001) a</td>
</tr>
<tr>
<td>Competitive Federal</td>
<td>-2% (0.737) b</td>
<td>-32% (0.896) b</td>
<td>-16% (0.000) a</td>
<td>1.428 (0.000) c</td>
</tr>
</tbody>
</table>

#### d. Party Status

<table>
<thead>
<tr>
<th>Unconsolidated</th>
<th>Unconsolidated</th>
<th>Consolidated</th>
<th>Consolidated</th>
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</thead>
<tbody>
<tr>
<td>Unconsolidated Unitary</td>
<td>1.053 (0.000) a</td>
<td>244% (0.298) c</td>
<td>506% (0.001)</td>
</tr>
<tr>
<td>Unconsolidated Federal</td>
<td>-71% (0.000) a</td>
<td>1.192 (0.112) a</td>
<td>76% (0.493) c</td>
</tr>
<tr>
<td>Consolidated Unitary</td>
<td>-83% (0.000) c</td>
<td>-43% (0.227) b</td>
<td>1.363 (0.000) c</td>
</tr>
<tr>
<td>Consolidated Federal</td>
<td>-84% (0.000) c</td>
<td>45% (0.197) a</td>
<td>-3% (0.506) c</td>
</tr>
</tbody>
</table>

Legend: Percent Difference/(p-value)/robustness rating. Text in Bold indicates Odds Ratio of the PoMean; Percents are percent deviation from the PoMean; a = OR and p-value robust to 200 bootstraps, b = OR and p-value robust to country-level jackknife, c = robust to both specifications. Highlighted text means p < 0.1. N=3,630
The results from the potential outcomes models for political competition can be interpreted as follows: (1) Competitive federal regimes lead to better insulation than competitive unitary states. (2) Non-competitive unitary and non-competitive federal states represent similar levels of BAC outcomes as competitive unitary regimes (with a slight chance of a negative relationship based on competition). (3) Both competitive and non-competitive federal regimes are at least as likely, if not more so, to have higher insulation levels than non-competitive unitary regimes. (4) There is no statistical difference in outcome likelihood between competitive and non-competitive federal states.

Results are similar for the party status and institutional regime models. In this case, consolidated federal states are significantly more likely to have professional BAC than either unconsolidated regime type, while consolidated federal regimes are at least as likely to offer professional BAC than consolidated unitary states. There is no statistically significant difference between unconsolidated federal and consolidated unitary regimes, though both are at least as likely as an unconsolidated unitary regime to experience higher levels of insulation.\footnote{Note that the party status models are less robust to other estimators, and both political competition and party status are less robust in the low/mid vs high insulation specification than in the low vs mid/high specification. Recall that this is most likely due to the lower observations in some of the high insulation/professional BAC bins.}

Unlike the ordered logit models, but similar to the contingency tables, the main effects seem to be the drivers of statistically significant differences in insulation outcomes. Overall, the potential outcomes analysis points to federalism and competition/consolidation independently increasing the likelihood of higher insulation. There may be an interaction effect, but it would further enhance both main effects by increasing the likelihood of competitive federal regimes having professional BAC.

### 3.5 Conclusions

My hypothesis was that federalism and political competition acted in such a way that low competition federal states were more likely to have some level of bureaucratic insulation (in this paper represented by bureaucratic accountability criteria, BAC) greater than low competition unitary states, but that this relationship would reverse in high competition states (see Table 3.2). Applying this theory to a 172-country, 38-year panel dataset, I have found evidence that higher levels of political competition lead to higher levels of insulation and that federal states are more likely
to have higher levels of insulation than unitary states. Further testing is necessary to determine whether these are absolute indicators or whether the hypotheses based on Table 3.2 are accurate. In particular, some measure of subnational competition, rather than just subnational party control, is required to test the theory as presented in Chapter 2; the results of the interaction effect would confirm the hypothesized theory if most of the competitive federal states in our sample also experience high levels of competition at the subnational level (See Table 3.1). For example, if the findings on federal country-year observations are based on states that are overwhelmingly developed and democratic (e.g., Australia, Canada, Germany, and the US), then the effect of federalism would appear uniform. In order to overcome this potential bias, the next research steps are to more closely examine competition in federal states and look at the cases just mentioned during periods when parties were less consolidated and competition potentially varied subnational to a greater degree.

Few studies have looked at the causes of bureaucratic autonomy cross-nationally. My findings lend support to the existing literature on importance of political competition on institutional design (Murillo & Martinez-Gallardo 2007, Murillo 2009) as well as the understanding that federalism may play an isomorphic role in bureaucratic professionalization (Wibbels 2005). On the other hand, the evidence for a compounding effect between the political party system and federalism (Filippov, Ordeshook & Shvetsova 2004) or a "pockets of excellence" effect (Geddes 1994) fail to find much support, though the discussion in the previous paragraph lays out ways future research may better test these theories.

Highly unbalanced panels mean that many standard econometric tools are unavailable to further test beyond the three approaches presented here. Future work could look directly at the states within one of the insulation levels (e.g. mixed political/professional BAC) and more closely observe the time series elements for the potential changes in political variables and insulation levels. Also, more small-sample comparison tests within either BAC groups or political competition/party status-institutional regime groups may also yield clearer mechanisms of change in insulation.

Insulation of bureaucratic functions from external political actors is a necessary first step in advancing public sector expertise and legitimacy, thus furthering the political autonomy of these agencies. This autonomy is linked to the provision of programmatic public goods found throughout modern welfare states, as bureaucratic autonomy can lend a sense of legitimacy to agencies, as well as encourage them to form cultures of excellence (e.g., professionalism, neutral competence, etc.)
within their ranks (Stillman 1999, Carpenter 2001 a). These characteristics have shown to enhance the prospects for economic growth (Evans 1989, Evans & Rauch 1999). Thus, understanding the political factors behind insulation, why political actors chose to move from a nepotic to a professional/merit bureaucracy, can aide political and economic development. Further study, both using alternative quantitative measures and qualitative methods is necessary to advance a comparative political understanding of the relationship between political agents, public agencies, and governance outcomes.
CHAPTER 4
THE CONSEQUENCES OF BUREAUCRATIC INSULATION FOR PUBLIC ORGANIZATIONS AND POLICY OUTCOMES

While contemporary academic literature has embraced the idea that civil servants are a good and necessary component to quality government, recent trends in the US and the UK have been to attack the ‘deep state’ that consists of careerist bureaucrats carrying out administrative tasks without taking into account the political preferences of the current head of government. This article attempts to ground the welfare-enhancing nature of meritocratic civil service in empirical investigation, i.e. to answer what having an insulated, autonomous, merit-based bureaucracy does for polities. Using arguments from comparative political economy and public administration literature, I claim that insulation, as represented by the empirical measure of bureaucratic appointment criteria, can improve both bureaucratic processes and policy outcomes. I test this hypothesis against five variables of interest: two regarding internal bureaucratic processes (salaried bureaucrats and CSO consultation) and three policy outcome variables (the impartiality of public administration decisions, the degree of universal public good provision, and the fiscal status in given regimes). My findings suggest that, while not true for every outcome, those outcomes most directly associated with democratic values clearly are influenced by bureaucratic insulation.

“The merit system of making appointments is in its essence as democratic and American as the common school system itself.” Theodore Roosevelt (1901)

4.1 Introduction

While contemporary academic literature has embraced the idea that civil servants are a good and necessary component to quality government (Miller 2000, Rothstein & Teorell 2008, Nistotskaya & Cingolani 2016), recent trends in the US and the UK have been to attack the ‘deep state’ that consists of careerist bureaucrats carrying out administrative tasks without taking into account
the political preferences of the current head of government (Baker, Jakes, Barnes, LaFraniere & Wong 2019, Landler 2020). This is not unprecedented, as many administrations, regardless of political orientation, distrust career bureaucrats (Aberbach & Rockman 1976, Cole & Caputo 1979, Kaufman 1981). What these administrations actually find is that such concerns are overstated and that careerists generally go about implementing executive and legislative policy regardless of political affiliation.¹ The difference with contemporary political discourse is the belief that meritocracy is not a reasonable foundation for public bureaucracies and that this view has persisted into the maturity of contemporary administrations.

Figure 4.1: Particularistic vs Public Good Provision Worldwide, 2017

This article is a preliminary attempt to ground the welfare-enhancing nature of meritocratic civil service in empirical investigation, specifically the degree to which having an insulated, autonomous, merit-based bureaucracy improves socio-political outcomes in polities.² In this paper I focus on the first adjective, bureaucratic insulation, which I define as the loosening or lack of political influence by elected officials over state organizations, within the constraints of a broader political system.³ I hypothesize that there is a clear link between bureaucratic insulation and several important state

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¹See Meier & Bohte (2007) as well as Kaufman (1981) for an overview of bureaucratic compliance within administrations hostile to bureaucratic self-interest.

²In previous research, I propose a formal abstraction model of increased insulation due to increased levels of political party competition interacting with federal/unitary systems (see Chapter 2) and then test the theory using post-third wave democracy cross-sectional time series data (see Chapter 3). This paper instead looks at the effects of increased insulation.

³See Reenock & Gerber (2008) for a discussion of the potential to insulate bureaucracies from outside interests groups.
procedural and outcome variables. I find while insulation does not seem to have an effect on whether bureaucrats are salaried or the fiscal status of a country, it does statistically influence whether state actors consult with civil society organizations, the degree of impartiality in public administrative decision-making, and the provision of universalistic public goods. These results hold even when controlling for alternative political explanations as well as a battery of control variables.

This research contributes to the comparative public administration literature through two primary mechanisms. First, it is one of the first contributions to look at political outcomes rather than economic/entrepreneurship as found in Nistotskaya & Cingolani (2016) using a panel of 172 countries over the course of thirty years. Second, this paper advances the need to consider multiple outcomes when engaging with institutional variables, while also carefully navigating the statistical issues with multiple hypothesis testing (The “Does X color M&M cause cancer?” problem) by using predefined nested models. While there is a growing literature that attempts to form links between internal and external outcomes in bureaucracies, the majority of the literature still focuses on one or the other (Rainey & Steinbauer 1999, Brewer & Selden 2000). This is a key development as focusing on improving one or the other set of outcomes can have unintended consequences in the other domain, as these are competing action arenas for political and bureaucratic politics (McGinnis, in Political Theory & Analysis. 1999). Moreover, as is illustrated in Figures 4.1 and 4.2, there may be substantial overlap between political outcome variables of interest, but there is still substantial visual difference in variables as complementary as public good provision (Figure 4.1) and public administration impartiality (Figure 4.2). Testing against both allows researchers to assess the value of institutional variables to both socio-political outcomes and to the understanding of the policy process.

In the next section (Section 4.2), I develop my hypothesis in the form of Figure 4.3 and then outline the statistical methods and data I will use to address the theoretical concern. Throughout this section, I briefly review pertinent existing literature on bureaucratic insulation, bureaucratic processes, and bureaucratic outcomes as they relate to my theoretical model. Sections 4.3 displays the empirical results of evaluating the effects of federalism and competition on insulation. Finally, Section 4.4 concludes with a discussion of the evidence as well as a future research agenda.
4.2 Theory & Methods

4.2.1 Theoretical Model and Underpinnings

Public administration literature is rife with theories and quotes as to the importance of public bureaucracies. As Meier & Bohte (2007) note, “Few aspects of a person’s life are left untouched by bureaucracy.” Their hypothetical US citizen has already been affected by no less than nine local, state, and federal agencies by the time they arrive to work. But it has not always been this way as illustrated in Stillman (1999): the US public sector went from being run by post-colonial statesmen and landowners to being a tool for populist mass politics, e.g. machine politics and clientelism and only at the turn of the 20th century did the idea of a meritocratic civil service take hold. This pattern is not only found in the US, but also throughout the developed and developing world (North & Weingast 1989, Evans & Rauch 1999, Acemoglu & Robinson 2012).

Much of the political economy literature focuses on insulation and meritocracy as a means of getting the government to credibly commit to its policies for economic growth (Fernandez-Albertos 2015, Nistotskaya & Cingolani 2016). Rather than focus on bureaucracies and bureaucratic insulation (BI) in general, this literature concentrates on the easily identifiable causes of central bank independence (CBI) whether it is influenced by political business cycles (Alpanda & Honig 2009, Maloney, Pickering & Hadri 2003) and the level of political liberty and stability in a state (Bagheri & Habibi 1998). The dominant paradigm for explaining CBI is the Principal-Agent model
where the central bank is the agent who receives independence only insofar as it is able to achieve the desired goals of the current political leadership (or at least give the impression that they are focusing on the political ends of said political actors). The literature also looks at the effects of CBI on price stability (Bodea & Hicks 2015) and employment (Iversen 1998), finding that the greater the level of independence, the greater the level of price stability and the more rational labor markets behave. The argument below discusses how bureaucratic insulation and independence can affect non-economic variables not commonly found in the literature.

As citizens have developed two primary expectations for bureaucracies—responsiveness to the public’s needs and competence in task execution (Meier & Bohte 2007)—public administration literature focuses on insulation as a valuable first step towards autonomy, which brings professionalization and responsiveness (Carpenter 2001a, Carpenter 2001b). There are numerous theoretical causes of insulation: bureaucracies are insulated when the insulated bureaucracies can act as a scapegoat (Fiorina 1989), when the cost of creating good legislation is greater than the cost of delegating (Epstein & O’Halloran 1999), when the conflict between bureaucrats is low and non-statutory disciplinary measures are cheap (Huber & Shipan 2002), when there are multiple veto players (Moser 1999, Keefer & Stasavage 2003), or when political parties face short-term losses in a competitive electoral system (McCubbins, Noll & Weingast 1987, McCubbins, Noll & Weingast 1989, Calvert, McCubbins & Weingast 1989, Moe 1989, Moe 1995, De Figueiredo 2002).

Insulation does not guarantee cohesion will happen (Carpenter 2001a, Meier & Bohte 2007, Masciandaro, Quintyn & Taylor 2008), but institutions that insulate the bureaucracy offer a means of political commitment to reward competence and professionalization (Mueller 2015). Successful management of resources with sustained societal support enhance and maintain the autonomy of bureaucratic agents (Goodman 1991). The bureaucratic processes identified in my model would only serve to reinforce Goodman (1991)’s virtuous cycle of insulation-management-discretion.

This paper addresses multiple responses to insulation, empirically represented in this paper by bureaucratic appointment criteria (BAC), by looking at internal effects (CSO Consultation and Bureaucratic Salaried) as well as external processes (Public Administration Impartiality) and outcomes (Public Good Provision and Fiscal Deficits). Figure 4.3 provides a basic visual representation
of the full model, with the arrows representing the causal pathways between variables. The next
subsections describe the theoretical significance of each of the model’s variables, how those variables
are empirically actualized, and finally a clear statement of the causal link and expectation.

Figure 4.3: Theoretical Variable Causal Diagram

4.2.2 Response Variables

Salaried Bureaucrats.

Most comparative public administration literature focuses on the role of wages on bureaucratic
outcomes by way of limiting or expanding corruption. Di Tella & Schargrodsky (2003) find evidence
for Becker & Stigler (1974)’s efficient wage hypothesis (EWH) by studying a price crackdown in
Buenos Aires hospitals. Van Rijckeghem & Weder (2001)’s findings also imply that while higher
wages do deter corruption, this only holds when there is a significant economic increase in wages if
wages are the primary tool.

Conversely, Gong & Wu (2012) argue that increased pay does not limit the level of corruption,
though their analysis is primarily a description of trends in China. Higher wages may actually lead
to an increase in corrupt activities as Kristiansen & Ramli (2006) find that people are willing to
pay to receive a job in Indonesia because of the level of stability and that prices paid for a position
rise with the possibility of continued promotion and the level of compensation.

Taylor & Taylor (2011) combine the study of EWH with Perry & Wise (1990)’s Public Service
Motivation (PSM) by organizational level wages and PSM scores across 15 different countries. In
those countries, there was not a public sector wage tax on non-management positions; i.e., public sector employees were paid approximately the same as their private sector counterparts. They also find that PSM is a more impactful factor at the supervisory/managerial levels than at entry and low-level employment since higher-ranking levels do appear to have some public sector wage tax. Finally, they found that efficiency wages are still important, particularly for lower income states.

Because wage levels are not available over a panel of this length and breadth, I treat the difference between salaried and non-salaried state employment similar to high-wage and low-wage employment in the EWH and PSM literature. Figure 4.4 is a 2017 snapshot of the variation in salaried vs. non-salaried state administrators, ranging from a very small share being salaried to essentially all state administrators being salaried. Based on the findings in Taylor & Taylor (2011), I hypothesize that increased insulation goes hand-in-hand with increased levels of salaried administrators and that this increase in the number of salaried individuals improves bureaucratic outcomes.

**Figure 4.4: Bureaucratic Salaried Worldwide, 2017**

Consultation with Civil Society Organizations (CSOs).

By consulting civil society organizations, states are acknowledging that this sector of society represents a significant set of stakeholders, many of whom are overlooked by market and government failure (Ostrom & Ostrom 1971, Weisbrod 1977, Hansmann 1980, Tocqueville, Heffner, Gregorian
These stakeholders are among the main sources of values (Waldo 1952) or “mores” for the telos of public action (Tocqueville et al. 2010), though participatory governance is rarely completely equitable (Schattschneider 1975). Moreover, stakeholder buy-in is critical for successful implementation (Mazmanian & Sabatier 1983). When citizens have some level of control over policies they have an incentive to garner better knowledge about agencies and they have greater capacity to articulate demands for services more effectively (Ostrom & Whitaker 1973). Citizens will provide more support for bureaucrats when they believe they have some voice in state decisions. This voice may preempt their desire to exit (and prevent a vicious policy loop) (Oakerson & Parks 1988) Finally, citizen voice and buy-in lowers the costs of maintaining policies as stakeholder buy-in increases trust within and between groups, requires less direct monitoring, and lower penalization (Ostrom 2005).

In political and economic development, CSO participation was popularized as ‘participatory rural appraisal’ by Robert Chambers in the 1980s (Chambers 1981, Chambers 1983) and has been identified as the primary alternative to donor-driven development in the non-governmental organization (NGO) literature. This ‘participatory development’ process was en vogue throughout the 1990s and early 2000s, though the concept may have morphed to that of ‘country ownership’ or ‘partnership,’ as well the adoption of more formal ‘civil society organizations.’ Regardless, much of the international development sphere asserts that developing communities have their own sets of skills, tacit knowledge, interests, and forms of decision-making, which means they need to be consulted and empowered for successful development initiatives (Schnable et al. 2019).

Figure 4.4 illustrates the broad degree of CSO consultation throughout the globe in 2017. Values range from no consultation with CSOs (or at least a general isolation of policymakers from CSO input) to formal and informal arrangements that ensure CSOs are recognized as important stakeholders and given voice. I expect to see a positive relationship between BAC and the level of consultation with CSOs. While state agencies are not apolitical, neither do they develop policy

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5 As Young (2006) points out, not all of these organizations are going to act in complementary ways to markets and governments to resolve these failures; instead, they may supplement markets/governments, or even be substitutionary/adversarial in their approach (Young 2000).

6 Whether these NGOs are accountable to either donors or local constituents is an open concern (Putzel 1998, Ebrahim 2003, Kilby 2006, Banks, Hulme & Edwards 2015).

agendas from scratch. As bureaucrats gain insulation from direct control by individual political actors, they can then turn towards providing competent and representative services to a broader swath of stakeholders; consulting with CSOs provides one means of achieving that end. Thus, my hypothesis is that an increase in the professional criteria for appointment correlate with increased levels of CSO consultation.

Figure 4.5: CSO Consultation Worldwide, 2017

Public Administration Impartiality.

Early in the history of public administration, Friedrich (1940) and Finer (1941) debated whether organizational/institutional science could be applied to civil servants to get them to act in an impartial and responsible manner or whether it required outside intervention. However, neither seriously adjudicated the role impartiality in state procedures and outcomes plays in good public administration. Perceptions of fairness and rule of law impact legitimacy and trust in the state. Rothstein (2003) argues that it is the Scandinavian belief in the impartiality of political institutions enhances their trust and willingness to delegate decisions to the state in universalistic welfare programs. As he points out, impartiality and objectivity are enshrined in several states’ constitutions. Besides providing a general overview of the literature on impartiality, Rothstein & Teorell (2008) argue that impartiality is a necessary element to move democracy from being a necessary but not sufficient condition of high quality government to a more complete system. They also state that “[i]mpartiality implies the rule of law,” and that while impartiality may or may not have an effect
on state effectiveness/efficiency, under a Rawls/Dworkinian theory of justice, impartiality is to be preferred to these measures.

Figure 4.2 displays the range of public administration impartiality rankings around the globe in 2017. Values range on a scale of having no respect for the law (completely biased) to having high levels of respect for the law (highly impartial). My hypothesis is that higher levels of BAC will free bureaucrats from being beholden to particular political interests and at least have the ability to act fairly and equitably to increased levels of impartiality in decision-making.8

Particularistic vs Public Good Provision.

Welfare regimes are emerging in less developed countries (LDCs) that have not followed the pre-commodification – commodification – decommodification patterns found in developed states, though the nature of these regimes are not necessarily converging to OECD forms (Rudra 2007). While provision in these states is partially driven by the nature of income differentials between low-, middle-, and high-income citizens (Lupu & Pontusson 2011), the more important distinction is between the provision of public goods versus particularistic goods (Calvo & Murillo 2013). By their nature (Ostrom & Ostrom 1977), public goods cannot be excluded from individuals based on electoral support for a given party. Particularistic goods, meanwhile, can and are often tools of machine politics. The type of good a state decides to provide can have more than simply redistributive effects.

The final chapter in Stokes et al. (2013) provides a comprehensive summary of the issues with non-programmatic resource distribution, ranging for inefficient allocation of resources and biasing elections for the polity to benefits going towards those individuals in a privileged machine system. They argue that there are legitimate ways for rules to be written and followed regarding (re)distribution and the key detraction in clientelistic systems is that benefits are tied to electoral choices at the party/machine level. On the other hand, when public goods are provided regardless of electoral choices, as they are in universalist and means-tested systems, the converse of the issues above tend to occur (e.g., resources are allocated more efficiently) and citizens develop trust in their government and view it as more legitimate (Rothstein 2003).

8This is a similar claim to Nistotskaya & Cingolani (2016), though they focus on entrepreneurship and private investment as indicators of public administration impartiality.
Figure 4.1 displays how, in 2017, states chose to apportion their spending towards particularistic or universalistic good provision. Values range from mostly particularistic to mostly universalistic and are converted to an interval scale from a categorical response. I hypothesize that states with higher levels of BAC insulate agents from particularistic whims and have placed greater value on generalized public goods, both of which should lead to greater provision of said public goods.

**Government Fiscal Standing.**

In macroeconomic theory, states would ideally run a fiscal deficit as the benefit of the ability to spend on goods and services in the present is only partially offset by the cost of borrowing as governments generally represent safer havens for fixed investment, thus being able to pay lower rates of return than other local agents. Coupled with reasonable rates of inflation, borrowing provides a reasonably safe means of procurement that does not hinder economic growth. However, large deficits are often viewed as risky investments and thus come with higher interest rates which can dampen economic growth, both in the future and in the present, as investors will expect either a significant increase in taxes (assuming the state is able to tax) or an increase in inflation in order to offset the higher interest rates, and inflation expectations have a strong and significant effect on present inflation.

Large deficits also tend to signal poor state taxation capacity, the need/expectation of the state to provide resources beyond its means, or a general lack of state capacity throughout the entire process of taxation, allocation, procurement, and spending.\(^9\) Deficits that become large enough to severely affect debt payment and economic growth often result in draconian austerity measures and external influence (e.g., the Washington Consensus (Williamson & for International Economics (U.S.) 1990)) by international government organizations such as the International Monetary Fund, the World Bank Group, and the various international development banks, as well as foreign governmental aid agencies.

Given this understanding of deficits as a proxy for state capacity and decision-making, I expect states with more professionalized appointment criteria to have increased state capacity and lower deficit (or greater surplus) levels. The variable government fiscal standing is operationalized as the

\(^9\)The interaction between taxation and state building/capacity is well documented in New Institutional Economics (Levi 1989, North & Weingast 1989, Timothy & Torsten 2011, Johnson & Koyama 2014)
difference between government revenue and government expenditures as a percentage of GDP.

4.2.3 Explanatory Variables

*BAC.*

The main theoretical explanatory variable, bureaucratic appointment criteria (BAC), is a single observation of repeated values taken from the most recent Varieties of Democracy dataset (Coppedge et al. (2019), hereafter referred to as VDEM (2019)). In VDEM (2019), country experts were asked “To what extent are appointment decisions in the state administration based on personal and political connections, as opposed to skills and merit?” The response variable is then operationalized as a low/mid/high categorical variable of a 1-5 Likert questionnaire where the categorical breakdown is 1-2 on the scale is ‘Mostly Political,’ 3 is ‘Mixed Political/Professional,’ and 4-5 is ‘Mostly Professional.’ Figure 4.6 plots the BAC for 2017, showing that the breakdown between levels is relatively even, with the fewest states possessing hiring/firing practices that are mostly based on skill and merit and the greatest number of states having closely mixed political and professional hiring/firing criteria.

![Figure 4.6: Bureaucratic Appointment Criteria Worldwide, 2017](image)

*Pass Through Effects.*

While the effects of insulation on the salaries of bureaucrats and their consultation with broader civil society is intrinsically interesting, both of these organizational processes are part of the means
for the quality of public organizational outcomes identified above. Therefore, regardless of the empirical relationship with BAC, these variables may have an (semi-)independent effect on the state outcome variables.

Salaried bureaucrats may be more insulated and develop professionalism because of the security found with stable incomes, though they may have to be protective of those salaries and thus more likely to embrace particularistic policies (Kristiansen & Ramli 2006). Similarly, without other measures, salaries may be a form of unemployment insurance or unemployment suppression device (Abell 1992, Roth 1992, Tang, Lai & Lin 2009). These salaried individuals could also be problematic since salaries also can lead to overhead that LDCs cannot afford (Rudra 2007).  

State consultation with CSOs can affect the quality of policy outcomes by involving multiple levels of stakeholders in order to make the bureaucracy more responsive to the public’s needs. Once citizen groups are able to voice their concerns, it can dramatically affect the design and implementation of state policies (Sabatier & Mazmanian 1979, Mazmanian & Sabatier 1983). After a path is decided upon, consultation with constituents can lend a sense of fairness and allow constituents to understand the underlying value in order to garner support for policy implementation (Nakamura & Smallwood 1980).

4.2.4 Alternative Hypotheses

Claims on Central Government as a Percent of GDP.

At a minimum, the size of the public sector grows as demand for the public provision of goods grows (Berry & Lowery 1987). The ability of the government to dedicate more societal resources to public balance sheets may lead to an improvement in outcomes for all citizens, even if not all at to the same level, without requiring a merit-based bureaucracy. Greater claims can indicate the (in)ability of the central government to access resources outside of its standard collections (La Porta, Lopez-de Silanes, Shleifer & Vishny 1999). Moreover, these claims can point to the organization of the economy around statist, corporatist, and/laisse faire principles (Esping-Andersen 1990). I use

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10 I also test a link between salaried bureaucrats and CSO consultation, understanding that it may not be the insulation that affects whether CSOs are consulted, but rather it is the resource availability represented by salaried bureaucrats.

11 As Meier & Bohle (2007) note, much of the literature on participative administration is grounded in pluralist political science, it has the same assumptions and/or weaknesses of that theoretical approach (Truman 1951, Schattschneider 1975, Dahl 1978).
the country-year weighted average percent as reported in the World Bank’s *World Development Indicators* (2019), hereafter WDI (2019).

**Political Competition.**

I focus on political competition over scarce votes; electoral risk is the likelihood of the current governing party or coalition losing its governing status in the next election (Kayser & Lindstadt 2015). At the extremes, electoral risk is unlikely to change governing behavior because changing behavior will not change the likely outcome: a party with near certainty of winning/losing is either under no real threat or doomed. As I argued in Chapter 3, political competition is most likely to affect policy or institution change under moderate levels of risk where a change in behavior may improve electoral prospects. Moderate electoral risk is also where parties must decide on which types of constituents they ought to focus: those at the margins or those within the core of the party. While these decisions can affect the response outcomes themselves, under certain circumstances, they can affect the level of BAC as well (see Chapter 3).

In order to measure political competition, I use a factor variable combining winning seat margin (the difference in the proportion of seats won by the government and the proportion of seats won by the opposition party(s)) and winning vote margin (the percentage of the vote received by the winning party less the percentage of the vote received by all other parties).\(^{12}\) This factor variable attempts to mitigate the issue where both authoritarian electoral regimes and populist machines can manipulate outcomes to make elections appear to be competitive (via vote margin), without them being free, fair, or truly contestable (Levitsky & Way 2010). Low government seat margins may still mean a lack of political competition, but non-competitive regimes are more likely to maintain the semblance of competition by winning by a reasonable margin or engage in semi-fraudulent activity and then use legislative malapportionment in order to maintain their desired winning coalition (Snyder & Samuels 2001).\(^{13}\) Win margins run the gamut from less than zero percent to 100 percent.

\(^{12}\) See Appendix E for details on the factorization process.

\(^{13}\) See Riker (1962) and Austen-Smith & Banks (1988) for discussion on the size/requirements of winning coalitions.
Party Status.

Besides the electoral risk and the dynamics of elections, the parties themselves have their own internal politics (Smyth 2006) and must solve their own social choice problems (Kitschelt & Smyth 2002). Consolidated party systems tend to have parties that accommodate these political and social issues. In this paper, party status is a factor variable combining the level of party permanence in a given state, the distinctiveness of party platforms, and whether the party is clientelistic, collectivist, or programmatic. Well-organized parties may be able to solve these social problems through internal delegation without the support of an insulated bureaucracy or may even be able to capture the state apparatus themselves. These parties would then be able to deliver their own outcomes, e.g. the employment security and resource allocation of machine politics in the late-19th/early-20th century US. However, by blending with the type of linkages formed by the parties as well as whether they have identifiable platforms, party status begins to indicate the level of consolidation in the political system and the ability for political competition to permeate to the administrative organs of the political system. Party status ranges from -2 to 2 with higher values representing more permanent, programmatic, and ideologically distinct parties.\footnote{While clientelism makes some sense as a fourth alternative hypothesis, the level of clientelism is, to a large degree, the about-face of insulation. Empirically, the relationship between clientelism and BAC as measured in VDEM (2019) is so strongly negatively correlated that it poses a multi-collinearity problem for the regression analysis and thus clientelism is not used in this analysis with the exception that clientelist parties are one of the factors in the party status variable.}

4.2.5 Control Variables

A wide range of political, economic, and demographic variables are tested to gauge the importance of their relationship with both BAC and the response variables.\footnote{The variable selection process is a mix between expected theoretically important variables and those selected to best explain BAC as found in Chapter 3. This allows the reader to ascertain whether BAC is a true explanatory variable or whether there is a confounding third variable causing both BAC and a response variable.} The primary political control is the Freedom House Index score (FHI), which speaks to the overall political environment (e.g., rule of law, civil and political rights, political stability, etc.) rather than particular political institutions such as the party system or the bureaucracy.\footnote{Rather than using the directly report from Freedom House, I use a combined direct and imputation method found in VDEM (2019) in order to lose less variables in the CSTS analysis.} Other political factors are considered in the selection of alternative hypotheses.
Economic and demographic variables come from the World Bank’s *World Development Indicators* (2019). The key related variables from the WDI are year-year growth in gross domestic product (GDP Growth); the GDP/capita, purchasing price parity, in constant US dollars (GDP/capita KD) as a measure of overall wealth/development; the consumer price index percent rate of change (Inflation) as a measure of inflation; the percentage of GDP from foreign direct investment (FDI) which is a proxy for a state’s exposure to foreign economic and political influence; claims on the central government as percent of GDP (Claims on Central Government Percent) as an indicator of the fiscal responsibility of the state; and the percent of GDP earned from oil exports (Oil Percent), a common control to sort out high income-low development states from high income-high development states. Finally, the average level of education found amongst adults in a state (Education) comes from VDEM (2019). See Appendix C for the full list of tested control variables.

### 4.2.6 Fixed-Effects Model

Given an unbalanced panel consisting of 172 countries over the years 1980-2017, I adopt a standard panel model approach as laid out in Enders (2015) as well as the nested model approach to model building in Agresti (2013). As discussed below, I first develop a baseline model with each of the response variables and the control variables. I then add theoretically significant variables to that same model family. It is important to have a clearly specified model family prior to repeatedly testing multiple response variables against a single explanatory variable, as this is statistically similar to multiple hypothesis testing issues, in which scholars test multiple explanatory variables against the same response variable (Tukey 1953). By using a limited number of response variables, focusing on a limited time period, and building nested empirical models, I have sought to minimize the possibility of erroneous calculation of standard errors.

Using the Hausman test for panel data, a random effects model is not consistent and thus I proceed with a fixed effects model. Neither the Augmented Dickey & Fuller (1979) (ADF) test nor the Kwiatkowski, Phillips, Schmidt & Shin (1992) (KPSS) test find significant evidence of a trend in the data. Next, I conduct Lagrange Multiplier tests for cluster and time effects and see significant effects for both, as well as serial correlation in the errors. Finally, I encounter significant levels of heteroskedasticity performing the Breusch & Pagan (1979) test. In order to maximally

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17Unless otherwise noted, all statistical coding is run in R 3.6.1. Data and code are available upon request.
contend with the time, cluster, serial, and heteroskedasticity issues, I use Arellano (1987)’s adjusted standard errors.

The general model can be specified as

$$Response_{it} \sim \alpha_{it} + \beta_{1it}[BAC] + \beta_{2it}[Controls] + \beta_{3it}[AltHypo] + \epsilon_{it}$$

where the response is one of the five selected variables below, the theoretical variable of interest is the BAC, the control variables are political, economic, and geographic variables that theoretically influence the response variable, and AltHypo represents the alternative hypotheses to test the strength of the explanatory variable. Completely specified, the model appears as

\[
\begin{bmatrix}
\text{bureaucratic, salaried} \\
\text{CSO_consultation} \\
\text{PA_impartiality} \\
\text{public_good_provision} \\
\text{gov_fiscal_status}
\end{bmatrix}_{it} \sim \alpha_{it} + \beta_{1it}[BAC] + \beta_{2it}
\begin{bmatrix}
gdp/capita \\
gdp_growtjth \\
inflation \\
lfpr \\
fdi \\
education \\
\text{oil_pct}
\end{bmatrix} + \beta_{3it}
\begin{bmatrix}
\text{cgov_claims} \\
\text{political_competition} \\
\text{party_status}
\end{bmatrix} + \epsilon_{it}
\]

The i and t subscripts stand for the i-th country at time t, the standard approach in a panel or cross-sectional time series (CSTS) analysis. A single observation is understood as a combination of a country and year, rather than either just a state in cross-sectional studies or a period in time series analysis. Two advantages of a CSTS approach are the ability to compare within state (e.g., changes in the level of authoritarianism in Russia) and the ability to have an unbalanced panel, even when some states only appear in the sample for a limited number of years.

Four models are run for each response variable: Model 1 is a baseline model which includes the intercept as well as the variables in $\beta_{2it}$ and the fixed-effects errors. From this model, we can gauge the effects of the theoretically salient variables as well as provide a goodness-of-fit.$^{18}$ Model

$^{18}$As is common in political science CSTS models, the amount of variance explained by the model is lower than those found in other social science applications, particularly economics (Adjusted-$R^2$ values ranging between 0.005 and 0.318 compared with 0.9 or greater in many economics applications). This is due to several
2 adds $\beta_{1it}[BAC]$ to the baseline model to cleanly demonstrate the effect of BAC on the response variables. After assessing the effect on the responses of bureaucratic salaried and CSO consultation, these variables are included in this model as potential pass-through effects as they are all internal organizational processes for the bureaucracy. Model 3 adds $\beta_{3it}$ variables and provides the strongest case for the alternative hypotheses. Finally, Model 4 is the completely specified model as shown above (theoretical variables, alternative hypotheses, and the control variables). This model shows the strength of the hypothesis when in the presence of the alternatives.

4.3 Results

In this section, each response variable is coupled with a figure that contains both a coefficient plot as well as the underlying fixed-effect model table. The goal is to provide an easy and intuitive interpretation of the results while also presenting the underlying model and statistics. As all of the response variables are interval observations, interpretation of coefficients and p-values are straightforward linear estimates (a unit increase in an explanatory variable leads to that variable’s coefficient’s value change in the response variable).

Bureaucratic Salaried

As one can quickly observe from either the coefficient plot or the regression analysis in Figure 4.7, the most interesting result is that almost none of the explanatory variables, whether control, hypothesis, or alternative hypothesis, seem to be linked to whether bureaucrats are salaried or not. The exceptions are (1) that higher education levels in a state are associated with greater rates of being salaried, possibly due to the fact that more highly educated citizens are more likely to have alternatives to work in salaried positions. (2) that in specifications [1] and [3], “partially free” states are less likely to have salaried bureaucrats than “not free” states, though this result weakens with the introduction of more direct political variables. Including BAC in specification [2], while not significant as individual coefficients, does improve the fit of the model; this would suggest that structural factors including the unbalanced nature of the data (hence, increasing the number of explanatory variables would dramatically decrease the number of states, if not the number of state-year observations) and the inertia of political variables, particularly those having to do with institutions. Ideally, given enough countries and years, one could better isolate the effects of any lags or spatial variables in a Spatial VAR model.
related bureaucratic politics and control variables may affect whether bureaucrats are salaried.

While this is not the hypothesized result, it is an interesting null in the fact that the connection between insulation and salaried bureaucrats is not straightforward, which leaves room for non-pecuniary explanations for professionalization as well as novel explanations for the emergence of salaried bureaucracies worldwide. Because of the relationship, or specifically, lack of relationship between higher levels of insulation and the likelihood of salaried bureaucrats, one can argue that pecuniary benefits are not the primary driving force for good public management, which corroborates studies mostly grounded in Western Europe and Anglo-American states (Perry, Mesch & Paarlberg 2006, Perry, Hondeghem & Wise 2010), though the Taylor & Taylor (2011) critique of using national level data does stand. Moreover, this also presents the opportunity to determine whether it is insulation or the pay structure of bureaucracies that more dramatically influence policy outcomes, as bureaucratic salaried becomes an explanatory variable throughout the rest of the analysis.

CSO Consultation

In contrast to the other intermediate bureaucratic outcome of salaried employees, Figure 4.8 demonstrates a significantly better fitting model with many explanatory variables affecting CSO consultation. There are essentially linear gains of 0.25 in CSO consultation per increased level of BAC which is only increased to 0.3 when the alternative hypotheses are included. In contrast, the greater the proportion of salaried bureaucrats in a state, the less likely policy decisionmakers will consult CSOs. The alternative hypotheses complement the BAC and pass-through analysis, with greater levels of political competition and more consolidated, permanent parties resulting in greater levels of CSO consultation. Education and the level of freedom within a regime both correlate strongly with greater CSO consultation as would be expected; however, the level of economic development (as represented by GDP/capita) is negatively correlated, which is not an expected result. Further research is needed to examine the dynamic of economic variable impact on cross-country policy processes.

19Some work has been done looking at Public Service Motivation (PSM) in East Asia (e.g. Bangcheng (2009), Kim (2009), and Liu & Tang (2011).

20The increase in explanatory power of the alternative hypotheses by themselves is offset by the decreased number of states and state-year observations.
Figure 4.7: Response Variable- Bureaucratic Salaried

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>[1]</th>
<th>[2]</th>
<th>[3]</th>
<th>[4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Competition</td>
<td>5.88E-03</td>
<td>5.46E-03</td>
<td>0.329</td>
<td>0.36799</td>
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<tr>
<td>Party Status</td>
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<td>-0.028</td>
<td>0.399</td>
<td>0.40993</td>
</tr>
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<td>Claims on Central Gov Percent</td>
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<td>1.72E-04</td>
<td>0.755</td>
<td>0.73191</td>
</tr>
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<td>0.005</td>
<td>-0.005</td>
<td>-0.005</td>
</tr>
<tr>
<td>FHI - Free</td>
<td>-0.036</td>
<td>-0.033</td>
<td>-0.045</td>
<td>-0.041</td>
</tr>
<tr>
<td>Oil Percent</td>
<td>2.39E-03</td>
<td>2.17E-03</td>
<td>1.50E-03</td>
<td>1.48E-03</td>
</tr>
<tr>
<td>LFPR</td>
<td>0.127</td>
<td>0.119</td>
<td>0.132</td>
<td>0.14179</td>
</tr>
<tr>
<td>GDP/Capita KD</td>
<td>6.03E-04</td>
<td>5.91E-04</td>
<td>1.12E-03</td>
<td>1.12E-03</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>0.496</td>
<td>0.413</td>
<td>0.163</td>
<td>0.15563</td>
</tr>
<tr>
<td>FDI</td>
<td>-1.23E-04</td>
<td>-9.21E-05</td>
<td>-2.57E-05</td>
<td>-2.29E-05</td>
</tr>
<tr>
<td>Education</td>
<td>0.047</td>
<td>0.046</td>
<td>0.038</td>
<td>0.039</td>
</tr>
<tr>
<td>Inflation</td>
<td>2.23E-06</td>
<td>3.06E-06</td>
<td>-8.52E-07</td>
<td>-4.07E-07</td>
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Statistics

<table>
<thead>
<tr>
<th>Adjusted-R²</th>
<th>DF</th>
<th>States(Note)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.021</td>
<td>9</td>
<td>126(3070)</td>
</tr>
<tr>
<td>0.035</td>
<td>11</td>
<td>126(3064)</td>
</tr>
<tr>
<td>0.005</td>
<td>12</td>
<td>119(2657)</td>
</tr>
<tr>
<td>0.005</td>
<td>14</td>
<td>119(2652)</td>
</tr>
</tbody>
</table>

Legend: Coefficient/P-value
### Table 4.8: Response Variable- CSO Consultation

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>[1]</th>
<th>[2]</th>
<th>[3]</th>
<th>[4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Competition</td>
<td>0.128</td>
<td>0.125</td>
<td>0.009</td>
<td>0.011</td>
</tr>
<tr>
<td>Party Status</td>
<td>0.638</td>
<td>0.634</td>
<td>0.000</td>
<td>0.001</td>
</tr>
<tr>
<td>Claims on Central Gov Percent</td>
<td>-1.74E-03</td>
<td>-9.98E-04</td>
<td>0.147</td>
<td>0.658</td>
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<td>BAC - Mostly Professional</td>
<td>0.524</td>
<td>0.009</td>
<td>0.006</td>
<td></td>
</tr>
<tr>
<td>BAC - Mixed Political/Professional</td>
<td>0.263</td>
<td>0.311</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bureaucratic Salaried</td>
<td>-0.016</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FHI - Free</td>
<td>0.586</td>
<td>0.411</td>
<td>0.330</td>
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</tr>
<tr>
<td>FHI - Partially Free</td>
<td>0.282</td>
<td>0.829</td>
<td>0.184</td>
<td></td>
</tr>
<tr>
<td>GDP/Capita KD</td>
<td>-1.58E-04</td>
<td>-2.05E-03</td>
<td>-4.48E-03</td>
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</tr>
<tr>
<td>GDP Growth</td>
<td>6.457</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LFPR</td>
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<td>-4.61E-03</td>
<td>-0.022</td>
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</tr>
<tr>
<td>GDP/Capita KD</td>
<td>0.909</td>
<td>0.737</td>
<td>0.455</td>
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</tr>
<tr>
<td>GDP Growth</td>
<td>0.909</td>
<td>0.737</td>
<td>0.455</td>
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</tr>
<tr>
<td>FDI</td>
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<td>0.003</td>
<td>0.015</td>
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</tr>
<tr>
<td>Education</td>
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<td>-0.033</td>
<td>-4.61E-03</td>
<td>-0.022</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.282</td>
<td>0.829</td>
<td>0.184</td>
<td></td>
</tr>
</tbody>
</table>

### Statistics

- Adjusted $R^2$: 0.119, 0.147, 0.157, 0.182
- DF: 9, 12, 12, 15
- States (Nobs): 126 (3210), 126 (3064), 119 (2777), 119 (2632)

Legend: Coefficient/P-value
Public Administration Impartiality

For a first test at the effects of BAC on policy outcomes experienced outside public agencies, I begin by looking at the relationship between BAC and the level of public administration impartiality per country-year; Figure 4.9 holds the results. As can be seen in the coefficient plots, the dynamics of the model are reasonably impervious to changes in the specification. While inflation and GDP growth are statistically significant in the model, their political economic significance is negligible. “Free” and “partially free” states experience a significant increase in PA impartiality compared to “not free” regimes. Consolidated party systems also lead to increased impartiality, perhaps indicating party bureaucratic structures that are better able to interact with decision-making apparatus. Finally, I find confirmatory evidence of the hypothesized relationship, with higher levels of BAC leading to both statistical and political significance, e.g., on average, moving from mostly political to mostly professional moves PA impartiality in a state more than half the distance between moderately biased to moderately impartial. This effect would be compounded by the positive effect CSO consultation has on public administration impartiality, as BAC is directly associated with CSO consultation as well.

Particularistic vs Public Goods Provision

The single greatest factor affecting whether states provide more public goods than particularistic goods is whether the appointment criteria is mostly professional or mostly political. As in the previous model, going from the latter to the former increases public goods provision by over half of a categorical unit.21 Again, this effect is compounded by the positive relationship between consulting CSOs and increased public goods provision. This is already considering the effects of living in a more free/pluralistic society, as represented by FHI, which also has a positive relationship with public goods provisions: citizens in more democratic countries are more likely to demand universal public goods. Finally, inflation, GDP growth, and education all affect the proportion of public goods provision at a statistically significant level, though education is the only one to do so at a politically economically significant level. The results of this model family are available in Figure 4.10.

21 Note that this variable has been converted from categorical to interval.
Figure 4.9: Response Variable- Public Administration Impartiality

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Coefficient</th>
<th>P-value</th>
<th>Coefficient</th>
<th>P-value</th>
<th>Coefficient</th>
<th>P-value</th>
<th>Coefficient</th>
<th>P-value</th>
</tr>
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<tbody>
<tr>
<td>Political Competition</td>
<td>-0.013</td>
<td>0.373</td>
<td>-4.13E-02</td>
<td>0.000</td>
<td>-1.87E-01</td>
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<td>Claims on Central Gov Percent</td>
<td>-1.27E-02</td>
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<td>-8.71E-04</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>BAC - Mostly Professional</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAC - Mixed Political/Professional</td>
<td>0.304</td>
<td>0.018</td>
<td>0.018</td>
<td>0.018</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Bureaucratic Salaried</td>
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<td>0.015</td>
<td>-0.190</td>
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<tr>
<td>CSO Consultation</td>
<td>0.236</td>
<td>0.000</td>
<td>0.236</td>
<td>0.000</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>FHI - Free</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>FHI - Partially Free</td>
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<td>0.304</td>
<td>0.343</td>
<td>0.304</td>
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</tr>
<tr>
<td>Oil Percent</td>
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<td>0.519</td>
<td>0.394</td>
<td>0.519</td>
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<tr>
<td>LFP R</td>
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<td>0.967</td>
<td>-0.006</td>
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<tr>
<td>GDP/Capita KD</td>
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<td>0.137</td>
<td>0.193</td>
<td>0.137</td>
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<td>GDP Growth</td>
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<td>6.89E-01</td>
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<tr>
<td>Education</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<td>Inflation</td>
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<td>-8.02E-02</td>
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<td>Statistics</td>
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<td></td>
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</tr>
<tr>
<td>Adjusted R²</td>
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<td>0.080</td>
<td>0.200</td>
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<tr>
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<td>12</td>
<td>16</td>
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<td></td>
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<td>119(2632)</td>
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</tbody>
</table>

*Legend: Coefficient/P-value
Figure 4.10: Response Variable- Particularistic vs Public Good Provision

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Coefficient</th>
<th>P-value</th>
<th>Coefficient</th>
<th>P-value</th>
<th>Coefficient</th>
<th>P-value</th>
<th>Coefficient</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Competition</td>
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<tr>
<td>Bureaucratic Salaried</td>
<td>-0.309</td>
<td>0.299</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CSO Consultation</td>
<td>0.197</td>
<td>0.339</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>FHI - Free</td>
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<td>0.459</td>
<td>0.283</td>
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<td>FHI - Partially Free</td>
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<td>0.289</td>
<td>0.209</td>
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<td></td>
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</tr>
<tr>
<td>Oil Percent</td>
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<td>-2.13E-03</td>
<td>0.631</td>
<td>-2.79E-03</td>
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<td>-7.79E-03</td>
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<td>9.32E-04</td>
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<tr>
<td>GDP/Capita KD</td>
<td>0.017</td>
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<td>0.002</td>
<td>0.092</td>
<td>0.107</td>
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</tr>
<tr>
<td>GDP/Growth</td>
<td>0.296</td>
<td>0.486</td>
<td>0.365</td>
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<td>0.156</td>
<td>0.211</td>
<td>0.185</td>
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<tr>
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<td>0.003</td>
<td>0.010</td>
<td>0.006</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation</td>
<td>-3.49E-03</td>
<td>-3.39E-05</td>
<td>-1.63E-04</td>
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<tr>
<td>Adjusted R²</td>
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<td>0.102</td>
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<tr>
<td>DF</td>
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<td>13</td>
<td>12</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>States (N obs)</td>
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<td>126(3064)</td>
<td>119(2777)</td>
<td>119(2632)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend: Coefficient | P-value
Government Fiscal Standing

Government fiscal standing in Figure 4.11 is the final policy outcome variable of interest. Unsurprisingly, low levels of inflation, higher growth rates, and greater economic development (GDP/capita) all contribute to improved fiscal standings for states. Surprisingly, states that have greater levels of education, are freer, and have consolidated party systems are more likely to be in worse fiscal positions. BAC and the pass-through variables are not statistically significant, except for CSO consultation in the full model. It is important to note that there is a dramatic decrease in both the number of states and the number of state-years compared to the previous analyses. This means that unique conditions in an individual state could permeate through the general analysis. In this case, there is a reasonable likelihood that advanced developed democracies, which tend to run fiscal deficits, are providing most cases in the analysis. It is beyond the scope of this paper to delve into the particular political causal factors behind government fiscal statuses in this dataset.

4.4 Conclusions & Implications

Using comparative political economy and public administration literature, I argued that insulation, as represented by the empirical measure BAC, can improve both bureaucratic processes and policy outcomes. I tested this hypothesis against five variables of interest: two regarding internal bureaucratic processes (salaried bureaucrats and CSO consultation) and three policy outcome variables (the impartiality of public administration decisions, the degree of universal public good provision, and the fiscal status in given regimes). Of the five, three find significant support in the panel dataset: policymaker consultation with CSOs, public administration impartiality, and public good provision all increase as bureaucratic insulation increases. Based on the literature discussed above, these three are the most important to democracy as they directly affect citizens perceptions of fairness, equity, and voice within state decision-making.

While my findings support the need for bureaucratic insulation, further research is needed to assess intermediate mechanisms between insulation and public management and public policy outcomes. I echo the call of Nistotskaya & Cingolani (2016) for increased breadth and depth of data on bureaucratic institutions. What are the cross-national factors that help transform the presence of bureaucratic insulation into public agencies that can act with some level of autonomy to fulfill
Figure 4.11: Response Variable - Government Fiscal Standing

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>[1]</th>
<th>[2]</th>
<th>[3]</th>
<th>[4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Competition</td>
<td>0.133</td>
<td>-0.066</td>
<td>0.737</td>
<td>0.865</td>
</tr>
<tr>
<td>Party Status</td>
<td>-0.981</td>
<td>-2.452</td>
<td>0.196</td>
<td>0.001</td>
</tr>
<tr>
<td>Claims on Central Gov Percent</td>
<td>-0.059</td>
<td>-0.078</td>
<td>0.009</td>
<td>0.000</td>
</tr>
<tr>
<td>BAC - Mostly Professional</td>
<td>0.273</td>
<td>0.544</td>
<td>0.196</td>
<td>0.001</td>
</tr>
<tr>
<td>BAC - Mixed Political/Professional</td>
<td>0.043</td>
<td>0.698</td>
<td>0.959</td>
<td>0.380</td>
</tr>
<tr>
<td>Bureaucratic Salaried</td>
<td>-1.193</td>
<td>-0.413</td>
<td>0.273</td>
<td>0.000</td>
</tr>
<tr>
<td>CSO Consultation</td>
<td>0.254</td>
<td>0.529</td>
<td>0.032</td>
<td>0.014</td>
</tr>
<tr>
<td>FHI - Free</td>
<td>-0.453</td>
<td>-0.706</td>
<td>-1.830</td>
<td>-2.396</td>
</tr>
<tr>
<td>FHI - Partially Free</td>
<td>0.735</td>
<td>0.599</td>
<td>0.691</td>
<td>0.059</td>
</tr>
<tr>
<td>Oil Percent</td>
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<td>-1.50E-03</td>
<td>-2.76E-03</td>
<td>-3.79E-03</td>
</tr>
<tr>
<td>LFPR</td>
<td>-0.009</td>
<td>0.000</td>
<td>0.009</td>
<td>0.000</td>
</tr>
<tr>
<td>GDP/Capita KD</td>
<td>-3.83E+04</td>
<td>3.25E+04</td>
<td>3.48E+04</td>
<td>4.18E+04</td>
</tr>
<tr>
<td>GDP Growth</td>
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<td>0.009</td>
<td>0.009</td>
<td>0.009</td>
</tr>
<tr>
<td>FDI</td>
<td>0.199</td>
<td>0.154</td>
<td>0.397</td>
<td>0.015</td>
</tr>
<tr>
<td>Education</td>
<td>-1.31E-03</td>
<td>-2.97E-03</td>
<td>-3.24E-03</td>
<td>-2.76E-03</td>
</tr>
<tr>
<td>Inflation</td>
<td>-7.49E-04</td>
<td>-7.22E-04</td>
<td>-1.19E-03</td>
<td>-2.82E-03</td>
</tr>
</tbody>
</table>

Statistics
- Adjusted R²: 0.243
- DF: 9
- States/Notes: 106(2072) 106(1972) 103(3860) 103(1761)

Legend: Coefficient/P-value
societal desires for a competent and responsive state apparatus? Moreover, these models are only tested in one empirical environment: more data would provide a means of testing these same variables at different levels of analysis and over different timeframes, providing needed robustness checks for omitted variable bias as well as potential endogeneity issues.

Over 130 years ago, Woodrow Wilson sounded the clarion call that “it is getting to be harder to run a constitution than to frame one” and that “[a]dministration is the most obvious part of government; it is government in action; it is the executive, the operative, the most visible side of government, and is of course as old as government itself” (Wilson 1887). The call was to use the science of administration to study how to improve the state and to position that study within the context of that state. This paper has attempted to show that across states and over time, insulation of the bureaucracy is associated with improved administrative and policy outcomes. As Roosevelt (1901) understood, a meritocratic civil service boosts democracy by encouraging trust between citizens and between citizens and their government; it provides legitimacy to governments attempting to implement their policy plans; and provides a means for all citizens to receive resources, regardless of station or privilege. When political actors complain of the ‘deep state,’ let them take into consideration how meritocratic, rather than political, appointment promotes high-quality and fair policy outcomes.
CHAPTER 5
CONCLUSION

Much of what citizens expect from their states are processes primarily within the purview of bureaucratic agents functioning as the state apparatus. When governments lose legitimacy or states fail to provide basic services effectively/efficiently or when agencies are captured by private interests, it is often the result of weak or predatory institutions design. Corruption is merely a symptom of underlying institutional issues, as it is political actors using the rules of the game to meet their personal incentives. Changing the underlying institutions to support professional organizations with political oversight is a fundamental means of getting to the root of such malfeasance. This dissertation looks at how changes to underlying political institutions, such as the political party system or the use of federal/unitary power, can create virtuous cycles of insulation-management-discretion as described in Goodman (1991) and some of the state-building effects of such cycles.

As mentioned in the introduction, my study is motivated by a dissatisfaction with the depth and breadth of the literature on institutional analysis of bureaucratic reform at the national level. An implicit assumption undergirds much of the existing literature that there is a need for limiting democratic involvement, aka “shock therapy” (Przeworski 1991) when attempting to implement large scale reforms. However, based on the differing experiences of Uruguay and Argentina (see Figure 3 in the introduction), technocratic and democratic processes both play a role in the voicing, planning, and execution of successful reforms. Therefore, reformers must recognize and incorporate the incentives created by the structures/institutions of political and economic engagement, as well as the outcomes of the policies to be implemented, within their framework.

Moreover, the existing literature on insulation and autonomy lacks a broader comparative approach. There are comparative case studies that look at a handful of agencies in the US or Western Europe and develop theories as to why some agencies gain insulation/autonomy and others do not (Kaufman 1969, Carpenter 2001a, Lewis 2004). These are important for identifying organizational level factors (leadership, culture, goals, stakeholders, etc.) that affect whether a public organization can function with some level of independence. However, they do not address broader political
and economic institutional factors—the rules of the game—that affect the level of insulation cross-
nationally or even intra-nationally (e.g., between US states).¹

There is literature that looks at bureaucratic insulation and autonomy from an institutional
perspective, though the vast majority focus on central banks (Bagheri & Habibi 1998, Bernhard
1998, Maloney, Pickering & Hadri 2003, Jeong, Miller & Sobel 2009, Bodea & Hicks 2015, Fernandez-
Albertos 2015). In the studies that do not focus on central banks, this literature finds three primary
drivers towards bureaucratic insulation: First, following the logic of Epstein & O’Halloran (1999)
and Huber & Shipan (2002), governing actors engage in transactions cost economic thinking, where
they can create and monitor policies themselves or they can delegate that responsibility (and
thus some measure of power) to a third entity, namely, a bureaucracy. Second, governing actors
must give bureaucratic agents some level of independence in order for the bureaucracy to be an
effective scapegoat for mistakes, inefficiencies, or policies that may be generally beneficial but
specifically costly for constituents (Fiorina 1989, Wilson 1989). Third, facing the possibility of
electoral loss, governing actors create bureaucratic agencies as a means of creating policy inertia
(McCubbins, Noll & Weingast 1987, Calvert, McCubbins & Weingast 1989, McCubbins, Noll &
builds on this third driver, arguing that electoral risk at both the subnational and national levels
drives bureaucratic insulation.

While the existing literature does create generalizable theory, there are several shortcomings
as noted by De Figueiredo (2002). It both lacks analysis on variations in the level of electoral
uncertainty and it lacks integration with other crucial institutional factors, such as presidential vs
parliamentary systems. These lacunae are primarily driven by studying the political history of the
US at specific moments (as in the case studies, which De Figueiredo is unable to escape as well).
This project begins to grout over some of the theoretical cracks of this political economy work by
looking both cross-nationally and intertemporally at insulation, both its institutional causes and
its policy effects. I have focused on political party systems and competition, as well as the effects
of federal or unitary states as the institutional levers which can vary across states and over time.
I also provide insight into the importance of bureaucratic insulation on organizational and policy

¹Notable exception include De Figueiredo & Vanden Bergh (2004)’s study of administrative procedures
acts in the US, and Peter Evans work on bureaucratic structure and less developed countries (Evans 1989,
Evans & Rauch 1999).
In Chapter 2, I began by methodically building from a single party system towards a three-party system, showing that only parties that expect increased electoral risk over the long term would support empowering bureaucratic agents at the cost of contemporary political power and that if there are multiple parties facing the same environment, the opportunities for cooperation are limited by the likelihood that insulation improves either future electoral chances or dramatically mitigates the future power of the ascendant party(s). This is without even directly addressing the differing policy platforms and utility from policy that these parties would derive; taking these different ideal points into account, one can readily see that cooperation across parties becomes more tenuous. These findings suggest that we would expect to see increases in bureaucratic insulation when there are larger changes in the electoral environment, but that even under these circumstances, the likelihood of insulation is low and highly dependent on the marginal costs and benefits of such institutional change.

Immediately upon introducing federalism, one can see how the conditions for hold-out actors arises, even in the basic single national party game, as I demonstrated using hypothetical simulations of the Argentine provinces. Intraparty competition for resources at the subnational level means that the party must resolve whether to support subnational units facing increased electoral risk by endorsing insulation at the subnational level while maintaining the greater degree of political power at the national level through political control of the bureaucracy. The malapportionment of political power amongst subnational units further increases the potential for disconnect between subnational party units insulating at the subnational level but holding out against national level insulation. When these intraparty interactions meet interparty competition, I find the interesting result that parties may use their subnational political power to signal their support for national level bureaucratic insulation even when that insulation is not guaranteed.

Comparing unitary to federalist systems, I revised my theoretical framework from the simple 2x2 table to the more complex table at the end of Chapter 2. The important difference is that the level of subnational competition is nearly as important as the national level competition for determining the likelihood of bureaucratic insulation. This chapter also demonstrates the power of network formation games within the political science and public administration toolbox: in a comparatively short and straightforward text, I was able to demonstrate the dynamics of moving outcomes.
from a single party to a multi-party system ($N > 2$), as well as illustrate the interaction of different parties at both the subnational and national levels when it comes to institutional reform, finding both Nash and farsightedly stable equilibria, which I then compared between the federal and unitary institutional settings.

In order to test the hypotheses from Chapter 2, I next built a large panel dataset using secondary data sources and analyzed it using contingency table analysis with mosaic plot for illustration, ordered logit models, and potential outcomes matching analysis. These three different quantitative approaches to analyzing a panel dataset have shown there to be direct effects of increased political competition, consolidation, and federalism on increased levels of bureaucratic insulation. This approach also demonstrates the effectiveness of using multiple methods when approaching social scientific research: none of the three approaches individually offer strong indicative evidence of the underlying relationship between competition, federalism, insulation, and the political/economic control variables. It is only taken together that one finds supporting evidence for absolute direct effects of political competition/party status and federalism, and a lack of support for an interaction between these main theoretical levers.

The findings from Chapter 3 may be in keeping with the more complete causal table presented in Chapter 2, but strongly suggests that the more simplistic 2x2 model is not complete enough to capture contemporary political dynamics. States with high levels of competition at both the national and subnational levels are expected to have the highest levels of insulation, but there is a dearth of cross-national analysis of subnational political competition and subnational party environments, which limits the ability to test the full model posited in Chapter 2. For example, if the findings on federal country-year observations are based on states that are overwhelmingly developed and democratic (e.g., Australia, Canada, Germany, and the US), then the effect of federalism would appear uniform. In order to overcome this potential bias, the next research steps are to more closely examine competition in federal states and look at the cases just mentioned during periods when parties were less consolidated and competition potentially varied subnational to a greater degree. Further investigation into the nature of the federal regimes in the panel from Chapters 3 and 4 would illuminate the validity of the more complex theoretical model.

Chapter 4 addressed the importance of bureaucratic insulation for public organizational and policy outcomes. Using the same dataset as in Chapter 3, I move insulation from a response to
an explanatory variable of five variables of interest to public administration: (1) the degree to which bureaucratic agents are salaried, (2) the degree to which the government consults with civil society organizations (CSOs) before making and implementing policy, (3) the impartiality of the decisions made by civil servants, (4) the degree of universal public good provision (as opposed to particularistic good provision), and (5) the fiscal status of the state. While all five variables may affect policy outcomes, the first two variables are intermediate outcomes within the internal bureaucratic process. The latter three variables then deal with the responsiveness and competence aspects expected of the state apparatus (Meier & Bohte 2007).

Of the five variables of interest tested using nested fixed-effect time series models, increased bureaucratic insulation had a significant direct effect on three, while controlling for both broader economic and political climes as well as pass-through effects from other policy and institutional variables. Insulation had a significant direct effect on government consultation with CSOs, public administration impartiality, and universalistic public good provision. As I argued in Chapter 4, these three variables are also those most associated with government legitimacy in a democratic regime because of their association with equitable and fair outcomes, and the ability of the citizenry to voice their values.

Combined, these chapters seriously address the need to study multiple levels of institutions to understand the impact of a particular political reform: the decision to insulate bureaucratic agencies. Federalism and some of the rules governing political competition are constitutional-level situations, where their configuration creates the rules at the collective choice level: formation of political parties, the contemporary electoral environment, and the structure of the state apparatus. These, in turn, affect operational level outcomes: the decision to provide universalistic public goods, the level of impartiality in decision-making, and whether to consult civil society organizations when making policy decisions, i.e. the outcomes from Chapter 4. This work shows that while federal/unitary distinctions are important, they are important primarily insofar as they affect the relationship between subnational and national party units. Chapter 2 clearly illustrates several

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2 For a comprehensive overview of levels of institutions and analysis, see Elinor Ostrom’s contribution in Sabatier (2007).

3 Some states may have constitutional level decisions regarding the bureaucracy as an institution, but those based on the US constitution will not. For a discussion on the issues that arise from an unclear institutional arrangement in public administration, see Rohr (1986) and particularly the critique in Ostrom (2008).
mechanisms through which subnational party conditions play a role in national policy reform. All three chapters also demonstrate the importance of consolidated, programmatic party systems in increasing the level of insulation in states.\(^4\)

Given these overarching findings, there are three main areas where extensive research is needed to compliment and/or augment the theory presented here: expanding the analysis using new data or different methodological approaches, further developing theory already found in this work, and linking the theory explored here with other veins of institutional analysis. First, future research should more specifically look at the time component of the panel data. The approach employed in Chapters 3 and 4 (fixed-effect regression) treats time as a variable meant to be controlled, so that each state-year can be compared to every other one. Instead, one can look at the lagged effects of institutional variables such as party status and federalism on insulation. One approach is to look at the changes over time within country or region: are there broad movements in competition that correlate with later movements in insulation levels? How long are these lags and are they unidirectional or oscillating? Given a long enough timeframe, vector auto-regression or error correction models can begin to identify some of these relationships, including Granger causality testing (Granger 1969). Thus, instead of looking at the relationship between levels of competition and levels of insulation across country-years, one compares temporal changes in competition with changes in insulation.

Besides looking at the temporal component, future work needs to conduct segmented analysis, most likely using small sample size techniques, on the data. Since the theoretical causes of insulation posited here rely on political competition, what explains differing levels of insulation within autocratic regimes? Again, the methods used in this study are controlling for autocracy and democracy using FHI and Polity IV indicators, but there is no suggested mechanism for their potential interactive effect with other institutional variables.

The most important extension is to get significantly more subnational data in order to truly test the theoretical model proposed in Chapter 2. How do subnational party units interact? What is the level of competition at this level? Are national level institutions malapportioned at the subnational level, favoring particular interests or regions? The call for better comparative data

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\(^4\)Consolidation status also has its own direct effect on several of the operational level factors, such as CSO consultation and the level of public administration partiality. See the analysis in Chapter 4.
on federalism is nothing new (Riker 1964), and it is widely recognized that the costs of truly comparative work on federalism are extensive (Wibbels 2005). However, without such comparative work, the understanding of a truly fundamental institutional arrangement will continue to evade political science research.

Second, there is a need to further deepen the theoretical concepts at play in this study. One example would be to form links between the established federalism literature to the literature on centralization/decentralization. This would create an opportunity to further unveil the mechanisms at work in the federal regimes and will provide many more cases for analysis; however, there is also the need for caution against theoretical stretching: as discussed above, federal/unitary arrangements are determined almost exclusively at the constitutional level. Without broad consensus on separate areas of sovereignty, conflict between units can ensure, with the result of semi-sovereign subnational units (in the case of a dominant central government) or fracturization resulting in a confederacy arrangement (in the case of dominant subnational entities) (Riker 1964). The literature on centralization/decentralization, on the other hand, is generally more concerned with collective choice and operational level analysis, looking at the devolution of decision-making to the local government and state apparatus without viewing these arrangements as fundamentally changing the rules of the game: if a new government comes to power, it may roll back policies that devolved power to, or centralized power from, subnational units. Any work in this area must address the degree to which these discrepancies in institutional arrangements empirically exist and whether they impact the political rules and outcomes in similar manners.

Similarly, there must be a joining of the understanding of political competition as presented in this study with a more robust theory of intra-party action. What are the mechanisms through which parties resolve internal division/conflict and how do these mechanisms then affect the actions of members, activists, and party leaders, particularly in reference to bureaucratic reforms? How do parties resolve different patterns of electoral competition at different electoral levels? How do leaders set the agenda and internally frame the need for the party to willingly divest itself from its current political power and give it to an external entity?

A natural methodological extension that would deepen the causal mechanisms described here would be the use of analytical or historical narratives. The core components of an analytical narrative (Bates 1998) are (1) a statement of the puzzle; in this research, the basic puzzle is “why
do similar countries develop insulated national-level bureaucracies and others remain nepotistic?”

(2) a model with actors (political parties), their payoffs (electoral success), the levers of interest
(political competition and federalism) and the outcome of interest (level of bureaucratic insulation);
(3) relevant cases; and (4) the metric by which to measure the model over the cases. Alternatively,
historical narratives focus on the strengths and limits of path dependence, note the possibility of
counterfactuals, and clarify theoretical mechanisms within both time and place (Carpenter 2001a).
While these approaches may not be as generalizable across states, they offer a means of closely
examining the defined theoretical causal mechanisms. Besides looking at the causal factors of
insulation, there is also the need to deepen the link between bureaucratic insulation and its impact
on societal outcomes, specifically political and market reforms: How are insulated bureaucratic
agents able to attain better procedural and societal outcomes?\(^5\)

Third, no subset of theoretical concepts creates a complete theory, regardless of how in-depth
one defines and models the concepts. In this study, the core theoretical levers to understanding
bureaucratic insulation are political party competition and the choice of federal or unitary state
composition. Complementary literatures and methods may offer further insights into the causes
and consequences of bureaucratic insulation, one of which is to study the critical junctures advanced
industrial countries faced while democratizing which lead to bureaucratic insulation. Essentially,
why was the Pendleton Act so effective in the US and what are similar junctures in other states
that have transitioned from clientelistic and politicized bureaucracies to bureaucracies grounded
in merit? Addressing the acute environmental action arenas (Ostrom 2005), including historical
circumstances and dependencies, can offer some insight into the causes and consequences of non-
linear bureaucratic transitions. Encompassed in this method is the need to look across multiple
timeframes, rather than just post-1980, in order to see the effects of early political and economic
institutional development.

Additionally, one can think of subnational units in federalism as “laboratories of democracy”
(New State Ice Co. v. Liebmann 1932), where competition means policy experimentation and
policy entrepreneurship lead to policy reform. Eventually, these policy decisions disperse to other
regimes, playing crucial roles in institutional innovation and adoption, as often studied in Ameri-

\(^5\)I have already collected communiques from the IMF and World Bank archives regarding the interactions
between IFI/INGO officials and domestic bureaucratic agents in Argentina and Uruguay.
can politics (Balla 2001, Brandt, Colaresi & Freeman 2008, Shipan & Volden 2008). Theoretically, one can model this by implementing sequential movements into the theoretical model developed in Chapter 2, while another supernetwork (party system) can observe the transitional payoffs. Empirically, taking spatial relationships more seriously, either through political gravity models or spatial regression analysis (Ward & Gleditsch 2008), may further clarify how much the level of bureaucratic insulation is due to internal political mechanisms versus how much is due to isomorphism, learning, competition, or coercion from surrounding or influential states (Shipan & Volden 2008).

As discussed in Chapter 4, across states and over time, insulation of the bureaucracy is associated with higher-quality and fair administrative and policy outcomes. Thus, understanding the role of different institutions and actors play in shaping bureaucratic insulation is vital. While this dissertation begins to fill in some of the knowledge gaps surrounding the reform of bureaucratic agencies and the effects of these insulation reforms, there are still many questions to be answered and exciting theoretical links to be formed around this concept.
Comparing the strategies of not forming an arc (G_{101} and G_{102}) with forming an arc with \( \beta \) (G_{103} and G_{104}), including the probability (\( p \)) of insulated bureaucracy if Party \( d \) invests vote share and probability (1 \( - \) \( p \)) of no insulation even with investment \( \theta \):

\[
v_d + \delta E[\kappa_d]v_d \leq (1 - \theta)v_d + p\delta E[\kappa_d]\frac{1}{1+\beta}v_d + (1 - p)\delta E[\kappa_d]v_d
\]

\[
0 \leq -v_d - \delta E[\kappa_d]v_d + v_d - \theta v_d + p\delta E[\kappa_d]\frac{1}{1+\beta}v_d + \delta E[\kappa_d]v_d - p\delta E[\kappa_d]v_d
\]

\[
\theta \leq -1 - \delta E[\kappa_d] + 1 + \delta E[\kappa_d]\frac{1}{1+\beta} + \delta E[\kappa_d] - p\delta E[\kappa_d]
\]

\[
\theta \leq p\delta E[\kappa_d]\frac{1}{1+\beta} - p\delta E[\kappa_d]
\]

\[
\theta \leq p\delta(E[\kappa_d]\frac{1}{1+\beta} - E[\kappa_d]).
\]

Thus, the analysis in the main text is a special case where \( p = 1 \). This holds true for both Sections 2.4.1 and 2.5.4.

**Table A.1: Restricted Four Party Networks**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>( \mathcal{H}_j )</td>
<td>( \mathcal{H}_j )</td>
<td>( \mathcal{H}_j(i, i_B) )</td>
<td>( \mathcal{H}_j(i, i_B) )</td>
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<td>( G_{401} )</td>
<td>( G_{402} )</td>
<td>( \mathcal{H}_j )</td>
</tr>
<tr>
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<td>( G_{403} )</td>
<td>( G_{404} )</td>
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</tr>
<tr>
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<td>( \mathcal{H}_j )</td>
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<td>( G_{406} )</td>
</tr>
<tr>
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<td>( G_{408} )</td>
</tr>
<tr>
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<td>( G_{409} )</td>
<td>( G_{410} )</td>
<td>( \mathcal{H}_j )</td>
</tr>
<tr>
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<td>( G_{412} )</td>
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<td>( \mathcal{H}_j )</td>
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<td>( G_{414} )</td>
</tr>
<tr>
<td>( j_4(i, i_B) )</td>
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Table A.2: Payoffs for Restricted Four Party Networks

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</tr>
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<tbody>
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<td>$j_2$</td>
<td>$j_3$</td>
<td>$j_4$</td>
</tr>
<tr>
<td>$v_1 + \delta E[c_1] v_1$</td>
<td>$v_1 + \delta E[c_1] v_1$</td>
<td>$v_3 + \delta E[c_3] v_3$</td>
<td>$v_4 + \delta E[c_4] v_4$</td>
</tr>
<tr>
<td>$v_2 + \delta E[c_2] v_2$</td>
<td>$(1 - \theta_2) v_2 + \delta E[c_2] v_2$</td>
<td>$v_3 + \delta E[c_3] v_3$</td>
<td>$v_4 + \delta E[c_4] v_4$</td>
</tr>
<tr>
<td>$v_3 + \delta E[c_3] v_3$</td>
<td>$(1 - \theta_3) v_3 + \delta E[c_3] v_3$</td>
<td>$v_3 + \delta E[c_3] v_3$</td>
<td>$v_4 + \delta E[c_4] v_4$</td>
</tr>
<tr>
<td>$v_4 + \delta E[c_4] v_4$</td>
<td>$(1 - \theta_4) v_4 + \delta E[c_4] v_4$</td>
<td>$v_4 + \delta E[c_4] v_4$</td>
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<td>$v_1 + \delta E[c_1] v_1$</td>
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<td>$(1 - \theta_2) v_2 + \delta E[c_2] v_2$</td>
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Table A.3: Argentine Provinces and Simulated Network Structure

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<td>Catamarca</td>
<td>$G_{201a}$</td>
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<td>Chaco</td>
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<td>Chubut</td>
<td>$G_{308a}$</td>
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<tr>
<td>Ciudad de Buenos Aires</td>
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<td>Cordoba</td>
<td>$G_{301a}$</td>
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<td>Corrientes</td>
<td>$G_{401}$</td>
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<td>Entre Rios</td>
<td>$G_{201c}$</td>
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<td>Formosa</td>
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<td>Jujuy</td>
<td>$G_{104a}$</td>
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<tr>
<td>La Pampa</td>
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<td>La Rioja</td>
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<td>Mendoza</td>
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<td>Neuquen</td>
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<td>Río Negro</td>
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<td>Salta</td>
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<td>San Juan</td>
<td>$G_{406}$</td>
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<td>San Luis</td>
<td>$G_{201f}$</td>
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<td>Santa Cruz</td>
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<td>Santa Fe</td>
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<td>Santiago del Estero</td>
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<td>Tierra del Fuego</td>
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<td>Tucuman</td>
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## APPENDIX B

### TABLE OF VARIABLES AND SUMMARY STATISTICS IN CHAPTER 3

#### Identification Variables

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<th>Variable Name &amp; Description</th>
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#### Insulation Variables

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<th>Median</th>
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<tr>
<td>BAC</td>
<td>Bureaucratic/Administrative Appointment Criteria: &quot;To what extent are appointment decisions in the state administration based on personal and political connections as opposed to skills and merit?&quot; Originally a 5-point scale reduced to 3 as the extreme values were present in only 1-2 states. Values range from 'mostly political' to 'few political' (relabeled mostly professional).</td>
<td>v2critrecadm_ord VDEM (2019)</td>
<td>6463</td>
<td>1.951</td>
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#### Political Competition Variables

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<th>Mean</th>
<th>Median</th>
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<tr>
<td>winning_seat_margin</td>
<td>Government Seat Margin: Computation using Lower chamber election seat share won by largest party less the share won by the next two largest parties.</td>
<td>Data Transformation of v2ellostal, v2ellostts, v2ellotvts VDEM (2019)</td>
<td>6143</td>
<td>36.504</td>
<td>23.559</td>
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<tr>
<td>winning_vote_margin</td>
<td>Government Vote Margin: Computation using Lower chamber election vote share won by largest party less the share won by the next two largest parties.</td>
<td>Data Transformation of v2ellotvlg, v2ellotvtsm, v2ellotvtm VDEM (2019)</td>
<td>5948</td>
<td>28.102</td>
<td>14.685</td>
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<tr>
<td>party_linkages</td>
<td>Party Linkages: &quot;Among the major parties, what is the main or most common form of linkage to their constituents?&quot; 5-point scale ranging from 'clientelistic' to 'policy/programmatic.'</td>
<td>v2psplinks_ord VDEM (2019)</td>
<td>6463</td>
<td>3.090</td>
<td>3</td>
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<td>5</td>
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<td>party_platforms</td>
<td>Distinct Party Platforms: &quot;How many political parties with representation in the national legislature or presidency have publicly available party platforms (manifestos) that are publicized and relatively distinct from one another?&quot; Values range from 'None' to 'All.'</td>
<td>v2psplatforms_ord VDEM (2019)</td>
<td>6463</td>
<td>3.382</td>
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<td>5</td>
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<td>permanent_party</td>
<td>Party Organizations: &quot;How many political parties for national-level office have permanent organizations?&quot; 5-point scale ranging from 'None' to 'All.'</td>
<td>v2psorgs_ord VDEM (2019)</td>
<td>6463</td>
<td>3.463</td>
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<td>f_political_competition</td>
<td>Political Competition: Factor variable scored using winning_seat_margin and winning_vote_margin, reversed. See Appendix E.</td>
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<td>f_party_status</td>
<td>Party Status: Factor variable scored using party_linkages, party_platforms, permanent_party. See Appendix E.</td>
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<td>0.120</td>
<td>0.319</td>
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<td>Binomial Political Competition Variable: divisions are created using R's discretization method on f_political_competition.</td>
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Variable Code | Variable Name & Description | Source | Obs | Mean | Median | Min | Max |
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<td>Min</td>
<td>Max</td>
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<td>-----</td>
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<td>--------</td>
<td>-----</td>
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<td>cat_party_status</td>
<td>Binomial Party Status Variable: divisions are created using R’s discretization method on party_status</td>
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<td>hyp_political_competition</td>
<td>Competition Hypothesis Categorical Variable: Stata generated categorical variable of cat_political_competition and fedtype.</td>
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<td>fedtype</td>
<td>Federal/Unitary Dichotomy: Composed in Norris (2015), 1: unitary state and 2: federal state. Watts’ Federalism Measure: Taken from Watts (2003), states are categorized as 0: Unitary, 1: Hybrid, or 2: Federal. These values do not vary over time in this dataset.</td>
<td>Norris (2015)</td>
<td>6356</td>
<td>1.289</td>
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<td>1</td>
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<td>watts</td>
<td>Watts’ Federalism Measure: Taken from Watts (2003), states are categorized as 0: Unitary, 1: Hybrid, or 2: Federal. These values do not vary over time in this dataset.</td>
<td>Norris (2015)</td>
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<td>subnational_party_control</td>
<td>Subnational Party Control: “Does a single party control important policymaking bodies across subnational units (regional and local governments)?” 3-point scale from ‘All’ to ‘Few.’</td>
<td>v2psunpar_ord VDEM (2019)</td>
<td>6463</td>
<td>2.064</td>
<td>2</td>
<td>1</td>
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<tr>
<td>checks</td>
<td>Institutional Checks: Number of checks through which decisions must pass before affecting policy.</td>
<td>DPI (2015)</td>
<td>5882</td>
<td>2.650</td>
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<tr>
<td>clientelism</td>
<td>Clientelism Index: “To what extent are politics based on clientistic relationships?” Interval from ‘Low’ to ‘High.’</td>
<td>v2elloeldm VDEM (2019)</td>
<td>2976</td>
<td>33.167</td>
<td>9</td>
<td>2</td>
<td>450</td>
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<tr>
<td>electoral_system</td>
<td>Electoral System: “What was the electoral system used in this election for the lower or unicameral chamber of the legislature?” 1: First-past-the-post (FPP, aka plurality) in single-member constituencies; 2: Two-round system in single-member constituencies; 3: Alternative vote in single-member districts; 4: Block vote in multi-member districts; 5: Party block vote in multi-member districts; 6: Parallel (SMD/PR); 7: Mixed-member proportional (SMD with PR compensatory seats); 8: List PR with small multi-member districts (mean district size &lt;7); 9: List PR with large multi-member districts (mean district size &gt;7); 10: Single-transferable vote (STV) in multi-member districts; 11: Single non-transferable vote (SNTV) in multi-member districts; 12: Limited vote in multi-member districts; 13: Borda Count in single- or multi-member districts.</td>
<td>v2elloelsy VDEM (2019)</td>
<td>6182</td>
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<td>11</td>
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<td>mdmh</td>
<td>Mean District Magnitude: “For this election, what was the average district magnitude for seats in the lower (or unicameral) chamber of the legislature?” Integer Response.</td>
<td>v2elloeldm VDEM (2019)</td>
<td>2976</td>
<td>33.167</td>
<td>9</td>
<td>2</td>
<td>450</td>
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<tr>
<td>polity</td>
<td>Polity IV Score, Revisied: See notes in VDEM (2019)</td>
<td>e_polity2, reversed. VDEM (2019)</td>
<td>6229</td>
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<td>cgov_claims_pct</td>
<td>Claims on Central Government weighted average percent of GDP.</td>
<td>FS.AST-CGOV.GD.ZS WDI (2019)</td>
<td>5318</td>
<td>9.539</td>
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**128**
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<th>Median</th>
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<th>Max</th>
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<tr>
<td>education</td>
<td>Education: 'What is the average years of education among citizens older than 15?' See notes in VDEH (2019).</td>
<td>e_peaveduc VDEH (2019)</td>
<td>5161</td>
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<td>7.07</td>
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<td>gdp_growth</td>
<td>GDP Growth: weighted average annual percent.</td>
<td>NY.GDP.MKTP.KD.ZG WDI (2019)</td>
<td>5947</td>
<td>3.592</td>
<td>3.737</td>
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<td>gdp_per_capita_pp_kd</td>
<td>GDP per capita, PPP: weighted average of 2011 international dollar, constant.</td>
<td>NY.GDP.PCAP.PP.KD WDI (2019)</td>
<td>4652</td>
<td>15284.06</td>
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<td>imports_pct</td>
<td>Imports of Goods and Services: weighted average percent of GDP.</td>
<td>NE.IMP.GNFS.ZS WDI (2019)</td>
<td>5614</td>
<td>42.545</td>
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<td>imr</td>
<td>Mortality Rate, Infant: weighted average per 1,000 live births, estimated.</td>
<td>SP.DYN.IMRT.IN WDI (2019)</td>
<td>6187</td>
<td>42.798</td>
<td>30.2</td>
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<td>mil_personnel_pct</td>
<td>Armed Forces Personnel: weighted average percent of total labor force.</td>
<td>MS.MIL.TOTL.TF.ZS WDI (2019)</td>
<td>4373</td>
<td>1.655</td>
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<td>oil_pct</td>
<td>Oil Rents: weighted average percent of GDP.</td>
<td>NY.GDP.PETR.RT.ZS WD (2019)</td>
<td>5843</td>
<td>3.998</td>
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<td>umr_modeled</td>
<td>Unemployment, Total: weighted average percent of total labor force, modeled ILO estimate.</td>
<td>SL.UEM.TOTL.ZS WDI (2019)</td>
<td>4730</td>
<td>8.003</td>
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<td>urban_pct</td>
<td>Urban Population: weighted average percent of total.</td>
<td>SP.URB.TOTL.IN.ZS WDI (2019)</td>
<td>6407</td>
<td>52.937</td>
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### APPENDIX C

#### TABLE OF VARIABLES AND SUMMARY STATISTICS IN CHAPTER 4

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<th>Variable Name &amp; Description</th>
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<th>Max</th>
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<tr>
<td>BAC</td>
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<td>Bureaucratic/Administrative Appointment Criteria</td>
<td>VDEM (2019)</td>
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<td>1.928</td>
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<tr>
<td></td>
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<td><strong>To what extent are appointment decisions in the state administration based on personal and political connections as opposed to skills and merit?</strong> Originally a 5-point scale reduced to 3 as the extreme values were present in only 1-2 states. Values range from 'mostly political' to 'few political' (rелabeled mostly professional).</td>
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<th>Mean</th>
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<td>bureacratric_salaried</td>
<td></td>
<td>Bureaucratic Salaried: “To what extent are state administrators salaried employees?” Originally a 5-point scale, now treated as interval. Values range from ‘none salaried’ to ‘all salaried.’</td>
<td>VDEM (2019)</td>
<td>6102</td>
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<td><strong>To what extent are state administrators salaried employees?” Originally a 5-point scale, now treated as interval. Values range from ‘none salaried’ to ‘all salaried.’</strong></td>
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<tr>
<td>cso_consultation</td>
<td></td>
<td>CSO Consultation: “Are major civil society organizations (CSOs) routinely consulted by policymakers on policies relevant to their members?” Originally a 3-point scale (‘No’, ‘To Some Degree’, ‘Yes’) now treated as interval.</td>
<td>VDEM (2019)</td>
<td>6463</td>
<td>0.5305</td>
<td>0.6230</td>
<td>-2.454</td>
<td>3.848</td>
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<td><strong>Are major civil society organizations (CSOs) routinely consulted by policymakers on policies relevant to their members?” Originally a 3-point scale (‘No’, ‘To Some Degree’, ‘Yes’) now treated as interval.</strong></td>
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<tr>
<td>gov_deficit</td>
<td></td>
<td>Government Fiscal Standing: government revenue less government expenses (Percent of GDP).</td>
<td>Data Transformation of GC.REV.XGRT.GD.ZS and GC.XPN.TOTL.GD.ZS WDI (2018)</td>
<td>3052</td>
<td>-0.282</td>
<td>-0.632</td>
<td>-201.83</td>
<td>70.482</td>
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<td></td>
<td></td>
<td><strong>government revenue less government expenses (Percent of GDP).</strong></td>
<td></td>
<td></td>
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<tr>
<td>pa_impartiality</td>
<td></td>
<td>Public Administration Impartiality: “Are public officials rigorous and impartial in the performance of their duties?” Originally a 5-point scale, now treated as interval. Values range from no respect for the law to fully respected by public officials.</td>
<td>VDEM (2019)</td>
<td>6463</td>
<td>0.2706</td>
<td>0.006</td>
<td>-3.685</td>
<td>4.445</td>
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<td></td>
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<td><strong>“Are public officials rigorous and impartial in the performance of their duties?” Originally a 5-point scale, now treated as interval. Values range from no respect for the law to fully respected by public officials.</strong></td>
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<tr>
<td>public_good_provision</td>
<td></td>
<td>Public Good Provision: “Considering the profile of social and infrastructural spending in the national budget, how ‘particularistic’ or ‘public goods’ are most expenditures?” Originally a 5-point scale, now treated as interval. Values range from mostly particularistic to mostly public good.</td>
<td>VDEM (2019)</td>
<td>6463</td>
<td>0.5794</td>
<td>0.722</td>
<td>-3.452</td>
<td>3.438</td>
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<th>Variable Name &amp; Description</th>
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<th>Obs</th>
<th>Mean</th>
<th>Median</th>
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<th>Max</th>
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130
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<th>Variable Code</th>
<th>Variable Name &amp; Description</th>
<th>Source</th>
<th>Obs</th>
<th>Mean</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
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<tr>
<td>electoral_system</td>
<td>Electoral System: “What was the electoral system used in this election for the lower or unicameral chamber of the legislature?” 1: First-past-the-post (FPP, aka plurality) in single-member constituencies; 2: Two-round system in single-member constituencies; 3: Alternative vote in single-member districts; 4: Block vote in multi-member districts; 5: Party block vote in multi-member districts; 6: Parallel (SMD/PR); 7: Mixed-member proportional (SMD with PR compensatory seats); 8: List PR with small multi-member districts (mean district size &lt;7); 9: List PR with large multi-member districts (mean district size &gt;7); 10: Single-transferable vote (STV) in multi-member districts; 11: Single non-transferable vote (SNTV) in multi-member districts; 12: Limited vote in multi-member districts; 13: Borda Count in single- or multi-member districts.</td>
<td>Data Transformation</td>
<td>5064</td>
<td>1</td>
<td>11</td>
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<td>fpolitical_competition</td>
<td>Political Competition: Factor variable scored using winning_seat_margin and winning_vote_margin, reversed. See Appendix E.</td>
<td>Data Transformation</td>
<td>5145</td>
<td>0.027</td>
<td>0.431</td>
<td>-2.325</td>
<td>1.169</td>
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<tr>
<td>party_status</td>
<td>Party Status: Factor variable scored using party_linkages, party_platforms, and permanent_party. See Appendix E.</td>
<td>Data Transformation</td>
<td>5145</td>
<td>0.248</td>
<td>0.312</td>
<td>-2.058</td>
<td>1.844</td>
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**Economic & Political Control Variables**

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<th>Median</th>
<th>Min</th>
<th>Max</th>
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</thead>
<tbody>
<tr>
<td>education</td>
<td>Education: What is the average years of education among citizens older than 15? See notes in VDEM (2019)</td>
<td>e_peaveduc</td>
<td>5154</td>
<td>7.064</td>
<td>7.07</td>
<td>0.218</td>
<td>13.61</td>
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<tr>
<td>fdi_pct</td>
<td>Foreign Direct Investment, net inflows: weighted average percent of GDP.</td>
<td>BX.KLT.DINV.WD.GD.ZS</td>
<td>5765</td>
<td>3.474</td>
<td>1.749</td>
<td>-58.323</td>
<td>198.074</td>
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<tr>
<td>fhs</td>
<td>Freedom House Status: Combined average of political rights and civil liberties. 1: Not Free; 2: Partially Free; 3: Free.</td>
<td>e_fhstatus, reversed</td>
<td>6358</td>
<td>2.071</td>
<td>2</td>
<td>1</td>
<td>3</td>
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<td>gdp_growth</td>
<td>GDP Growth: weighted average annual percent.</td>
<td>NY.GDP.MKTP.KD.ZG</td>
<td>5945</td>
<td>3.592</td>
<td>3.735</td>
<td>-64.047</td>
<td>149.973</td>
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<tr>
<td>gdp_capita_ppp_kd</td>
<td>GDP per capita, PPP (Log): weighted average of 2011 international dollar, constant</td>
<td>NY.GDP.PCAP.PP.KD</td>
<td>4650</td>
<td>8.966</td>
<td>9.054</td>
<td>5.889</td>
<td>11.728</td>
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<tr>
<td>lpr_modeled</td>
<td>Labor Force Participation Rate, total: weighted average percent of total population ages 15+, modeled ILO estimate.</td>
<td>SL.TLP.CACT.ZS</td>
<td>4894</td>
<td>62.487</td>
<td>62.116</td>
<td>36.954</td>
<td>90.626</td>
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<tr>
<td>oil_pct</td>
<td>Oil Rents: weighted average percent of GDP.</td>
<td>NY.GDP.PETR.RT.ZS</td>
<td>5843</td>
<td>3.998</td>
<td>0.013</td>
<td>0</td>
<td>78.552</td>
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## APPENDIX D
### TABLE OF STATES INCLUDED IN ANALYSIS

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<thead>
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<td>Republic of the Congo</td>
<td>Zimbabwe</td>
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</table>
APPENDIX E

FACTORIZATION OF PARTY STATUS AND POLITICAL COMPETITION VARIABLES

The variables pertaining to elections (winning_seat_margin, winning_vote_margin, permanent_party, party_linkages, and party_platforms) are loaded into a factor list. A scree plot (Figure E.1) is created using the minimum residual factor criteria. The R package psych also conducts an analysis that compares the scree factors of the observed data with a random data matrix of the same size. The figure clearly shows one strong factor with eigenvalue greater than 1 and another factor clearly differentiated from the random data, though the eigenvalue is less than one.

Figure E.1: Scree Plot of Electoral Factors

Conducting an exploratory factor analysis using two factors and searching for a principal factor solution, the factor list under an oblique rotation loads as follows in Table E.1. Factor scores are determined using the “tenBerge” technique for oblique rotations to create f_party_status for loading PA1 and f_political_competition for loading PA2 (reversed, as the greater the margin, the less competitive the election).
Table E.1: Oblique Factor Loading

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<td></td>
<td>PA1</td>
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<tr>
<td>winning_seat_margin</td>
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<tr>
<td>winning_vote_margin</td>
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<tr>
<td>permanent_party</td>
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<tr>
<td>party_linkages</td>
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<td>party_platforms</td>
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<td>SS Loading</td>
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<tr>
<td>Proportion Variance</td>
<td>0.38</td>
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<tr>
<td>Proportion Explained</td>
<td>0.54</td>
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2006-2009. Senior Research Associate, Research Division. Federal Reserve Bank of St. Louis, St. Louis, MO.

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