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THE POLITICAL ECONOMY OF HEALTH: DEATH, DISEASE AND DISTRIBUTION

BY

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DISSERTATION

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Abstract

Death and disease exact a heavy toll on citizens in democracies. In response, citizens expect elected politicians to alleviate their suffering by providing public health funding to afflicted areas. I argue that the funding of health policy in democracies is subject to distributional incentives similar to other government policies. Patterns of government control, partisanship, strategic importance and quality of legislative representation condition the provision of public health funding within countries. In turn, public health spending conditions district mortality outcomes. I examine evidence from turn of the century France, United States and modern India to test this theory. First, I consider qualitative evidence of the distribution of health funds. I then assemble administrative district level electoral, budgetary and health information and predict levels of health funding and resulting mortality rates. Political importance, not just need, plays a prominent role in determining who lives and dies in democracies. This has profound implications for the plight of modern democracies facing disease threats.

To the friends and family who picked me back up.

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Chapter 1

Deadly Politics

Distribution lies at the heart of democratic politics. Democratic institutions often strive to ensure that representatives are elected by an equal number of voters but cannot ensure that all voters are equally advantaged in the political process. While a simplistic understanding of democracy describes it as a form of majority rule, where parties currently in power make decisions benefiting the majority of the voters, this does not capture the incentives of parties and politicians for reelection. In practice, the realities of democratic politics may subvert the public good or majority will by making certain voters more politically important than others. Parties and politicians seeking reelection respond to this pattern of electoral importance by favoring some voters over others, creating winners and losers using government policy. The logic of political survival motivates politicians to distribute public policy not according to need or equity, but according to political importance.

This project focuses on the hitherto undescribed role of domestic distribution in public health funding. Most scholars consider health funding an ethical or technical problem. Getting the type of treatments right, nailing down the science of medicine and then making sure that public health budgets are appropriately large is the focus of scholarly and policy discussions of public health. It may seem natural to assume that the goal of health policy for political decision makers is simple: the reduction of misery within their borders. After all, one of the first priorities of the state is to ensure all its inhabitants' basic physical security. The integrity of this assumption breaks down, however, when considering the constraints of scarce resources, especially in developing democracies. In the face of limited resources, democratic politicians cannot realistically satisfy their populations' health needs completely.

How, then, are health distribution decisions made? Will politicians distribute using a solely need based approach?

I argue that political importance, not just citizen need, plays a prominent role in determining who receives health assistance in democracies. To explain health funding and mortality patterns, I treat public health as a political problem. Elected politicians distribute public health funding to districts in order to meet their political needs, rather than medical necessity. They seek to maximize their own reelection chances rather than lives saved. As a consequence, politically influential constituencies will be more likely to receive public health assistance. I develop a theory explaining politician motivations to distribute health resources and identify the determinants of government health provision. In particular, I identify four sources of political importance: electoral support levels of parties currently holding power, strategically important electoral districts, patterns of health partisanship and representation by influential legislators. I contend that these constituencies will receive extra public health funding and have lower mortality rates.

I test my hypotheses in a novel empirical environment. Policymakers and scholars largely confine discussion of political trade-offs in health and mortality to the modern developing world. Developing world politicians, however, play a complex political game with international organizations. The interests of exogenous international actors make valid analysis of the domestic politics of health in modern developing cases extremely difficult. I overcome this problem by instead analyzing early 20th century countries experiencing health crises of similar severity without aid from international actors. I test my distributional theory of health in the late French Third Republic (1910-1940) and turn of the century United States (1900-1950). Modeling health spending and mortality in this period isolates the domestic distribution of health and sidesteps the serious problem of causal contamination from international actors. Finally, an analysis of India (1971-1999), a modern case, rounds out the empirics in order to assess the salience of domestic health distribution in the presence of international interests. All of these countries experienced high mortality rates from a variety

of diseases such as influenza, malaria, tuberculosis and waterborne illness. Overall mortality rates in the early 20th century in Europe and North America were very similar to developing countries today.

Politically motivated distribution of health funding has profound policy implications. My research suggests that more democracy is not, in itself, a panacea to health crises because democratic politicians distribute public health in order to secure elections. This runs counter to conventional wisdom advocated by many international organizations, who advance democracy promotion and increased transparency as solutions. Political competition alters health patterns and therefore conditions who lives and dies within democracies. If politicians distribute health policy to accomplish domestic political goals, rather than eradicate health problems, even relatively well governed democratic countries may fail to adequately address citizen health needs. This jibes with cursory knowledge of current disease patterns. Some of the most well governed, relatively democratic countries in Africa, for example, suffer the greatest in the struggle against HIV/AIDS. Democratic South African leaders famously did little to confront the scourge of HIV/AIDS (Butler 2005*b*, Willan 2004). Botswanan HIV/AIDs rates remain high. Poor health affects other developing democracies such as India as well. International health aid donors in particular must pay careful attention to patterns of distributional politics in order to help reduce disease and misery. This is especially important in the wake of recent international initiatives such as the 2005 Paris Declaration and 2008 Accra Agenda for Action that emphasize domestic ownership and control of international health programs. The trend towards more domestic control of international aid resources necessitates increased monitoring to ensure that funds are not used as distribution for domestically important, rather than highly vulnerable, populations.

My work also contributes to the legislative studies and comparative political economy literatures on distributive politics by using an unusual setting, public health, to demonstrate how political incentives directly change welfare outcomes. Scholarship modeling legislative incentives usually concerns itself with the distribution of a relatively narrow set of policies

such as tax rates or trade barriers. Instead, I focus on a policy area with potentially fatal consequences for voters. Health resource distribution has a visible policy component, public health spending programs, and a directly measurable outcome, mortality rates. This makes it an ideal area to identify the substantive impact of distributive politics on voters. In addition, my distributive theory brings together a broad array of domestic determinants of political importance including electoral conditions, institutions, party ideology, and representation. Previous work tends to only study each incentive to distribute in isolation. Finally, my work is a rigorous subnational empirical examination of distributive political behavior across countries, something relatively rare in the comparative political economy literature.

1.1 Health in the Comparative Perspective

Before outlining a theory of health funding, however, it is important to introduce the context of the current scholarly literature on comparative health. The health literature describes a policy area ripe for distributional behavior by domestic politicians. Current discussions of health and health distribution are confined primarily to poor health in the developing world. Developed countries, NGOs and international organizations devote significant attention to ensuring equitable and need based health outcomes for populations. International health aid efforts met with mixed success and provoked a copious literature on the challenges of minimizing developing world misery and maximizing donor goals.

The growth of new diseases like HIV/AIDS and the resurgence of diseases such as tuberculosis and malaria have hit the developing world over the last quarter century, creating health crises throughout the world (Lashley & Durham 2002, Whitman 2000, Garrett 2001). Social scientists first responded to the growing importance of health as a political issue by evaluating the impact of health crises on governance and democracy. Scholars generally treat health threats as exogenous events damaging states and political actors. Most recent work pertains to the HIV/AIDS pandemic. Aggregate, country level, conditions motivate this

literature. Economists began by forecasting the detrimental impact of disease on economic output and overall health spending (Quattek 2000, Haacker 2002, Haacker 2004, Casale & Whiteside 2006, Gallup & Sachs 2001, Jamison, Sachs & Wang 2001, Lewis 2005). Political scientists followed their lead by hypothesizing the effect of health crises on domestic politics. The impact is thought to be broad, affecting state capacity, eroding governance and even endangering national security (Price-Smith 2002, Barnett & Whiteside 2000).

The literature suggests that health deficiencies may result in political and economic capacity problems (De Waal 2003). The WHO, for example, argues that resurgent disease damages countries “because [countries] lack the necessary resources, because their health infrastructure has collapsed as a consequence of under-investment and shortages of trained health workers, or because the infrastructure has been damaged or destroyed by armed conflict or a previous natural disaster” (WHO 2007, 57). Political scientists find the same associations, showing that political constraints like conflict, dictatorship and income inequality are associated with lower levels of aggregate health spending (Ghobarah, Huth & Russett 2004). In short, this positions poor public health as a problem generated by a lack of economic and political capacity, an overall lack of resources. This causal story suggests that it is the constraints that politicians operate under, rather than policy choices by politicians, that undermine population health. Responding to this dominant perspective, the health and policy communities place heavy emphasis on matters that can best be described as technical and non-political (e.g. Najman 2001). They assume that with high enough health spending, the correct programs, health institutions, and state capacity, health problems will be alleviated.

Country level analysis and figures, however, tell us nothing about the domestic politics of public health or who is sick or dying within countries. While aggregate data can speak to spending on health worldwide, finding it is “high and very unequally spread,” it can only suggest that “public policy may play a role in improving the effectiveness with which resources are transformed into better health,” without any capacity to test if this is true

(Poullier, Hernandez, Kawabata & Savedoff 2003, 202). Most of the literature describes within country political dynamics only at a superficial level even though they determine the ability and willingness of governments to respond to health crises. The identity of those at risk is critical information determining the relationship between domestic politics and health. HIV/AIDS does motivate some political scientists to become more specific about the effects of the disease on domestic politics.¹ Within democracies, scholars suggest some specific detrimental effects of disease on voters, parties and institutions. Matlosa, Strand & Strode (2004), for example, discuss and synthesize the specific effects of HIV/AIDS on voter turnout. Others use case study and field work to investigate politician attrition and effects on party candidate quality and selection (Manning 2003, Youde 2001, Butler 2005*a*). Nevertheless, most of the work remains anecdotal or hypothetical in nature.

The intense focus by the comparative health literature on the country level relationship between health threats and politics, where health threats erode governance, is short-sighted. Evidence from policymakers suggests that the causal relationship also operates in the opposite direction. Politics can perpetuate health crises. Within country quantitative evidence from the World Bank, for example, shows that public health, even when properly funded by effective institutions, does not reach those that need it, especially among the poor (Filmer 2003, Castro-Leal, Dayton, Demery & Mehra 1999, Gwatkin, Wagstaff & Yazbeck 2005). This is unsurprising given that the logic of poor health as an exogenous technical problem contradicts political science’s basic models of the distribution of public resources. The political economy literature indicates that the demands of electoral politics generally subvert a needs based approach to policy issues. There is no reason to assume that domestic governments, even transparent and uncorrupt democracies, will distribute health resources to groups that most need them. Throughout history, “the tension between democratic and bureaucratic politics” continues to restrain the plans of doctors and health bureaucrats from securing health for those who need it (Porter 1999, 146). Efficient policy

¹For general literature reviews of politics and HIV/AIDS, see either Manning (2002) or Dickinson (2006)

output is not the only goal of politicians. Politicians instead face incentives to choose medically inefficient public health policies when confronted with an environment where multiple groups are in need of health resources.

While there is a nascent literature of the politics of distribution of health and social services, most of it relies on measurement of aggregate conditions to infer lower level distributional patterns (Ghobarah, Huth & Russett 2004, Hicken & Simmons 2008, Alexander 2008). Political scientists and other scholars have only begun to investigate the presence and effects of inequalities in health distribution at the subnational level (Lynch 2008, King, Gakidou, Imai, Lakin, Moore, Nall, Ravishankar, Vargas, Téllez-Rojo, Ávila, Ávila & Llamas 2009). The quantitative findings of the literature on the subnational distribution of health services is that significant inequities exist in subnational health distribution, often targeting groups that are not high need groups. In an extensive subnational survey analysis of 11 Southeast Asian countries, for example, World Bank scholars found that health expenditure is usually pro-rich and not consistent with a counterfactual model of needs based distribution (O'Donnell, van Doorslaer, Rannan-Eliya, Somanathan, Adhikari, Harbianto, Garg, Hanvoravongchai, Huq, Karan, Leung, Ng, Pande, Tin, Tisayaticom, Trisnantoro, Zhang & Zhao 2007). In practice, the government under serves many groups with high morbidity and mortality while others without great need amply served. This subnational evidence suggests that something else is at work, determining health spending patterns, and that a lack of capacity is not the only force in health crises, as most scholarly and policy literature suggests. The comparative health literature ultimately raises a crucial question: why do democratic politicians fail to meet the health needs of their most vulnerable populations and whom do they target instead?

Chapter 2

A Theory of Public Health Resource Distribution

Discovering why funding does not reach those who need it provides motivation for directly modeling health spending and outcomes within countries. I advance a political explanation of these patterns. Many democracies face large scale health crises. Such countries cannot completely resolve these health crises due to a scarcity of medical and economic resources, even when those budgets are bolstered by international aid money. As a result, politicians in afflicted democracies face decisions between competing groups when distributing public health. In the end, I hypothesize that it is political considerations, rather than health needs, that in part determine which populations are given health resources. This reinforces health inequities and prevents the need based public health efforts the comparative health literature argues for.

I extend the basic story of distributive politics, of winners and losers, to the area of health resources. Domestic politicians must choose some sick voters over others when deciding matters such as where clinics are built and health funds are spent. This creates a high stakes distributive environment where politicians face difficult and unavoidable trade-offs between voters. I synthesize insights from the political economy of distribution, electoral incentives and legislative studies literatures into the unique context of health, forming a new theory of health resource distribution. My theory incorporates the fundamental incentives of core vs. swing voter trade-offs, the partisanship of health and the importance of political representation to make predictions about who the subnational winners and losers will be in public health. It indicates that when we consider the political realities of distribution, certain populations will receive more health funds than others in order to win votes and

ensure the reelection of democratic politicians.

2.1 The Foundations of Health Distribution Theory

For politicians, the pressure to use health funds as a form of distribution is intense, especially in countries facing significant disease prevalence. This pressure comes from the bottom up, from voters, who face threats to their physical security (Downs 1957). In fact, the scope of the threats to individual security in countries with health crises is massive. Morbidity and mortality rates can be extremely high, potentially threatening large populations of voters with sickness and death.¹ I contend that physical security lies at the core calculus of well being for voters, often trumping other material factors like income, employment or ideology in their voting calculus. Insofar as voters place their continued health and life above their income or ideology in their short and long term priorities, voters will demand health measures from political parties and representatives.

Politicians in democracies therefore face incentives to provide public health resources to voters as distribution. The way political scientists model distribution's impact on voter calculations in elections is relatively straightforward. The voting decision in distribution models is often simplified to either incorporate income alone, serving as a rough proxy for well-being (Cox & McCubbins 1986, Myerson 1993), or more commonly income and ideology (McGillivray 2004, Dixit & Londregan 1996). Voters in these models weigh their ideological position relative to competing political parties along with any particularistic benefits they were promised in elections when deciding whom to vote for. Politicians can use particularistic benefits, increasing voter well-being, in order to manipulate electoral outcomes in their favor. Voters will be more likely to vote and more likely to vote for parties promising increased material benefits. Using health resources as particularistic electoral benefits can ensure well-being for voters, preventing morbidity or mortality, and therefore function as an effective

¹Morbidity refers to infection with disease or poor health, while mortality refers to deaths.

form of political distribution.

Politicians hold the power to improve health outcomes and well being for voters by increasing public health resources provided to groups and areas. An individual's health is not, in and of itself, a public good since they primarily enjoy the benefits of their own good health and some forms of treatment like vaccination are excludable. Nevertheless, an individual's poor health may provide substantial negative externalities to all other individuals in their region or even country, creating a collective action problem and an inefficient provision of public health measures (WHO 2002, 10). In particular, communicable disease, the determinant of 30% of the global burden of disease, often has dire externalities for everyone living in the same geographic area as afflicted individuals (Woodward & Smith 2003, 11). As a result, for countries in health crises, relying on private health spending alone can be ineffective in controlling and preventing disease and does not ensure physical security for voters. While private health spending often treats individuals suffering from disease, privately treated healthy individuals remain at continued high risk if other individuals in their vicinity remain unhealthy. Consequently, government led public health efforts are needed to stave off poor public health conditions like rampant infectious disease or poor sanitation that private efforts cannot reliably provide. This is illustrated by the abject failure of charitable organizations, private practice doctors and other non-government efforts to combat major health crises in the United States and Europe in the 19th century. All countries eventually moved to some form of public health program or solution, even in highly liberal, market-orientated economies (Rosen 1958, Porter 1999). Since remaining healthy is a top priority for voters and public health measures are not easily substituted by private spending, the distribution of health resources by the state is a potent tool for parties and politicians as particularistic policy. Voters need government supplied measures to ensure their own health by controlling disease among others in their geographic areas.

In addition, public health funding is often highly visible, tangible and attributable to legislators for their reelection, another characteristic making it effective as a transfer to gain

votes and political support. Voters must be able to connect improvements in their well-being due to particularistic transfers to actions by politicians for them to be effective electorally (Downs 1957, 38). Health resources often meet this criteria. Malaria, for example, is combated by distributing nets, draining swamps and distributing drugs. HIV/AIDS is combated most effectively through distributing, at no or subsidized costs, a complex cocktail of antiretroviral drugs to the community directly through public clinics and hospitals. Hospital projects, the construction of public health infrastructure and free treatment are also visible and easily appreciated forms of government provided public health. Politicians can directly affect voters using public health in an observable way that buys votes and directly protects the most vital form of voter well being, their life.

In this way, health funds can function like other forms of distribution such as trade or tax breaks, transferred to individuals and areas to bolster political support. The primary difference between other forms of distribution and health is the high stakes nature of public health distribution. Building extra hospitals is more salient to populations under physical threat than simply putting a dollar in a voter's pocket or providing trade protection for their job. In fact, such spending can frequently protect voters from mortality from infectious diseases. The high salience of health funds relative to other forms of distribution means that politicians may in fact prefer to use public health to maximize electoral rewards as opposed to other forms of distribution in many circumstances. A dollar spent by the government on public health may be more valuable than a dollar spent some other way, especially in the context of a broader environment of poor health in low income, high mortality developing countries.

Health resources also have unique characteristics that make them salient in the long term as distributive goods. Specifically, distributing public health measures to districts does more than buy votes in the short term. In the long term, health funding can preserve targeted voters' health for future elections. Since poor provision of public health can lead to long term disability and death, politicians shape the long term electoral geography of their districts

when providing particularistic public health.² Comparative health evidence from Africa suggests that high morbidity and mortality environments erode voting constituencies and organization by killing and disabling voters—put succinctly in a sign from a nurse in Kenya, “don’t worry about the elections, all the voters will be dead” (Youde 2001, 3). Politicians therefore have long term as well as short term electoral motivations for supplementing health in politically important areas.

2.2 Determining the Winners and Losers

Given the strong reasons for politicians to favor the use of health resources as a form of distribution, there is a compelling motivation to build a theory of the winners and losers of this distribution. I argue that politicians are most responsive to constituents who are politically important. Political actors secure power for themselves by providing assistance to critical constituencies with public health resources. They attempt to win votes in the short term and ensure the survival of voters in the long term with health related transfers. Before outlining a theoretical story of political importance that identifies the expected winners and losers in the health distribution game, I first describe the causal underpinnings of my theory of health distribution.

I contend that the characteristics of public health as a distributional good make the geographical area the logical and most appropriate unit of analysis. Specifically, public health has major positive externalities relevant to entire geographic areas. Individuals receiving treatment or improved sanitation from the government benefit, but so may all others in their geographic region with decreased rates of death and disease. In addition, in contrast to many types of distributive spending like tax breaks or tariff barriers, health can be a very blunt instrument, difficult or impossible to provide at the subdistrict level effectively. Disease treatment, clinic and hospital funding, and sanitation improvements target areas

²This endogenous effect on mortality resembles the manipulation of Boston’s electorate with punitive tax policies described by Glaeser & Shleifer (2005)

with many types of individuals rather than particular classes or age groups as a tax policy would. Targeting individuals or classes with health resources would be relatively ineffective in improving public health and voter physical security. The contagion effects of diseases mean that all individuals in an area suffer the collective negative externality of poor public health, even when some individuals receive specific protection. To illustrate, consider a government policy distributing health measures only to certain politically important individuals, rather than an area, threatened by communicable diseases. This treatment would not serve to greatly decrease the public health threat, even to those individuals benefiting from the distribution, because of their context within disease ridden geographic areas. They could simply be reinfected with the same disease or infected by different communicable diseases originating from sick, untargeted individuals in their area. By contrast, between geographical areas there can be significant public health differences without necessarily greatly affecting on another.³

In addition, non-elected local or regional administrative officials make distribution decisions about health within geographic areas in most health systems. As a result, politicians at the national level often have little control over the distribution of policy below the regional or local level. As it stands, my theory seeks to capture the distribution of health resources by national politicians. As a consequence, I limit the analysis to the macro level of geographic units that politicians would realistically control. Politicians cannot distribute health to areas where they do not have administrative tools to control. Finally, victory in electoral contests, a vital motivation for the distribution of health, takes place in the context of geographical districts. Regardless of electoral system, most democracies feature a system with some sort of district or unit structure (Lijphart 1999, Cox 2006). It makes sense, then, to embed a theory of distribution in the same geographical context that politicians operate

³Save for perhaps the case of the most virulent, extremely fast spreading infectious communicable diseases, outbreaks of which are quite rare. These types of diseases do not make up the vast majority of day to day misery in high mortality democracies facing health threats (Laxminarayan, Chow & Shahid-Salles 2006). Nevertheless, in future work I plan to examine the effects of different disease types on resource distribution.

within.

I also conceptualize much of my theory in terms of the current government's control over health resources. Parties in government dominate health policy because, in general, they set the domestic political agenda (Cox & McCubbins 1993). Being in government, in and of itself, is a vital goal for parties so that they hold the levers of government. They control the legislative agenda, set the budget and pass policy. Ruling government parties and politicians also influence administrative and bureaucratic implementation. This is particularly important for health resources, which are often governed using administrative institutions like the Public Health Service or Centers for Disease Control in the United States or under the auspices of the Ministry of the Interior or Health in parliamentary regimes like France. Governing parties and politicians, therefore, have direct and indirect control over health resources. Parties and legislators in government decide which voters and districts to target with health resources. Like the extant literature on distribution, where most models emphasize the powers of incumbent governments to distribute particularistic policies (Dahlberg & Johansson 2002, Ansolabehere & Snyder 2006), my theory adopts this logic. Politicians in government wield special advantages when they seek to bolster their support using health resources as transfers.

For these reasons, I couch my theory in terms of ruling governments and politicians altering health resource levels between administrative and electoral districts. But which administrative and electoral districts will politicians in power target? The distributive politics of particularistic policies is a well studied topic in both the American and comparative legislative studies context. In order to make predictions about how health is targeted, I synthesize a theoretical framework drawn from relevant literatures into an original theory of health resource distribution. This theory incorporates a wide variety of arguments, bringing together disparate theories predicting the winners and losers of distribution. I anticipate that districts with more support for the current government, electorally strategic districts, patterns of health partisanship and legislator characteristics will determine who receives dis-

proportionate health resources. I discuss, in turn, the legislative literature supporting this theoretical framework and my theoretical expectations. These arguments accord with the broader literature in legislative studies and political economy exploring theories of distributive politics. After describing them, I provide a summary of my theoretical arguments in Table 2.2. Later, I will focus my theory into specific hypotheses in the political context of the particular empirical cases of France, the United States and India.

Governments, Distribution and Core Voters vs. Swing Voters

One significant question facing scholars studying distribution is whether politicians in power target core voter groups or swing voter groups. Most of the literature indicates that politicians have incentives to focus their distribution on a single voter type. Whom they target depends on the motivation that drives their distribution behavior, since politicians face competing incentives to distribute to different groups. Breaking away from the bulk of scholars, I argue that, given the theoretical credibility and empirical support for targeting both core and swing voters, governments make simultaneous efforts to target core voters and swing voters in different electoral contexts. Some districts will be targeted to deliver health resources to core voters while others will also be targeted to expand support among swing voters.

The literature defines core voters as those voters who are solid party supporters. Their vote is not easily swayed by transfers and their consistent support forms the basis of parties' continued electoral strength. It takes large quantities of transferred resources to switch a core voters' allegiance; so much, in fact, that targeting an opponent's core voters is generally a waste of resources. In practice, governments motivated to spend on core voters will send resources to their own core party supporters to bolster support while neglecting other parties' supporters and fence sitting swing voters.

Swing voters in political economy models, by contrast, are relatively easily swayed (Dixit & Londregan 1996). They are generally ideologically moderate, lying somewhere between

competing parties in preferred ideology. Such voters require very little material compensation to switch their vote, since they are relatively indifferent between parties ideologically. Therefore, swing voters could be extremely receptive to distribution. Alternatively, swing voters may be ideologically committed but have a high responsiveness to transfers—even small transfers may change their vote choice despite their ideology. Swing voters are, in short, “cheap” targets for distribution seeking to change vote choice.

Government incentives to target core and swing voters are multifaceted. The theoretical literature on distribution focuses on three primary motivations causing governments to target particularistic policy at core and swing voters: persuasion, coordination and mobilization (Cox 2005, Cox 2006). When governments use health transfers to persuade, they attempt to change vote choice. This is distribution in its most recognizable form: the government promises health resources to a group of voters, claims credit for those resources when they are delivered and receives additional votes in return in current and future elections. This can take the form of pork barrel spending, patronage or individual vote buying (Schaffer 2007). Governments motivated by an incentive to coordinate, on the other hand, attempt to distribute resources to keep voters satisfied in order to prevent new parties from forming. Coordinating governments promise health resources to voters to ensure that new entrepreneurs do not form their own parties, undercutting and splintering the governing party. The third motivation to distribute health, mobilization, focuses on ensuring that current party supporters maximize their political participation and turnout. Governments distributing with this motivation send health transfers to districts as rewards for turnout in previous elections and to ensure maximum turnout in the next election.

Of these three motivations to distribute particularistic policy, the most actively debated is persuasion. Do core or swing voters have their votes bought in elections? Game theoretic models of persuasion make competing predictions about the winners of distributive policies. There is theory to support the persuasion of core and swing voters with distribution. Cox & McCubbins’s (1986) formal model indicates that core voters will be the winners of the

distribution game. They argue that the risk averse nature of politicians leads them to target known quantities—core voters—with their distribution. By contrast, Lindbeck & Weibull (1987) provide the seminal formal model for targeting swing voters in the distribution game. Other models yield similar predictions (Persson & Tabellini 2002). They argue that politicians target swing voters because of the lack of alternatives for core voters. In their models, core voters are trapped. They have no leverage over their parties to receive particularistic goods because they cannot credibly threaten to defect from the party by voting for an alternate party. Dixit & Londregan (1996) fuse both swing and core voters in the same persuasion model, showing that only in the context of machine politics, where one party has significant advantages in efficiency and knowledge when serving its core voters, will we observe core voter targeting. In all other cases we would expect easily swayed swing voters to receive funds. More recent models strengthen the theoretical support for swing voter hypotheses. Stokes (2005), for example, shows that imposing more realistic dynamic conditions such as repeated elections on the distribution model leads to parties targeting swing voters, even in the context of machine politics. Taken as a whole, therefore, the bulk of the literature suggests there is a compelling theoretical case to expect swing voters to be the targets of vote buying when considering distribution only as a form of persuasion.

Particularistic spending intended to stave off new parties, on the other hand, targets core voters unambiguously. Political parties constantly face internal pressures to maintain their party integrity (Cox 1997). Political entrepreneurs can exploit opportunities created by under compensated core voters to create new parties. While core voters exert no leverage on their party using threats of defection to other parties, they can credibly threaten to form new parties or join splinter groups. This is dangerous for parties in power as it threatens to split their vote, reduce their legislative power and create power struggles among their supporters. This pressure exists even in relatively stable party systems. In the United States, for example, the Progressive Party and movement emerged in the first decades of the 20th century, undermining the Republican Party and leading to major electoral setbacks. To

Table 2.1: Theory Predicting the Target of Distributive Behavior

Motivation	Desired Effect	Type of Voter Benefiting
Persuasion	Change Votes	Swing Theory Dominates
Coordination	Prevent New Parties/Splinter Groups	Core
Mobilization	Ensure Voter Turnout	Core

prevent challenges like this, governments distribute benefits to their core voters to inoculate them against the temptation to form new parties. Core voters therefore stand to lose material benefits if they change parties. They receive health resources from the government and in exchange continue to coordinate their support on their current party, rejecting challengers created by entrepreneurs.

Finally, governments distribute particularistic policy to voters in order to mobilize them for elections. The target of this type of distribution is core voters. Governing parties cannot assume that their voters will turn out to vote since voting involves a substantial private cost with low potential benefits. Without the votes from their core supporters, parties are sure to lose elections. Indeed, recent studies emphasize this motivation. They suggest that distribution can be better understood as turnout buying as opposed to vote buying (Dunning & Stokes 2007). In short, “by rewarding unmobilized supporters for showing up at the polls, parties can activate their own passive constituencies” (Nichter 2008, 19). Promises of particularistic benefits motivate core voters by providing them additional incentives to pay the cost of voting. Governments, then, need to use distributive policies to induce core voters to vote in order to win elections.

I summarize the motivations discussed by the literature to target swing or core voters in Table 2.1. Most scholarship on persuasion suggests that politicians distribute resources to swing voters while coordination and mobilization incentivize politicians to target core voters. Government distribution of particularistic policy is a topic that has attracted frequent empirical testing, so an assessment of this theory in the real world is feasible. In practice, if one or more of the effects are dominant in the distributional game played by governments,

we would expect to see either core or swing outcomes dominate empirical work.

All told, the empirical results are utterly mixed. Tests in a variety of different environments find that either core or swing incentives may predominate. Studies examining evidence of distribution find substantial support in a variety of contexts from the United States to Latin America for the core voter targeting motivations of mobilization and coordination (Levitt & Snyder 1995, Bickers & Stein 2000, Balla, Maltzman & Sigelman 2002, Martin 2003, Ansolabehere & Snyder 2006, Chen 2008, Diaz-Cayeros, Estévez & Magaloni N.d., Nichter 2008, Horichi & Saito 2009). Issue areas range from intergovernmental spending to states, a form of quite fungible spending, to the very specific area of spending on higher education. In particular, it is important to note that recent articles finding support for core voter compensation indicate that mobilization, rather than coordination, is driving their empirical results, suggesting that “monetary awards appear to primarily affect whether core supporters vote, offering empirical support for the mobilization and turnout-buying theories” (Chen 2008, 27). On the other hand, a variety of other tests reveal tendencies for governments to favor swing voters with their distribution, in just as wide a variety of countries and issue areas (Bickers & Stein 1996, Denmark 2000, Case 2001, Dahlberg & Johansson 2002, Calvo & Murillo 2004, Stokes 2005). They find that swing groups like poor voters, who are extremely sensitive to additional government support regardless of ideology, and voters in marginal districts with a reputation of inconsistent party support receive extra benefits from the government in exchange for their votes. This suggests that governments do engage in persuasion in order to win swing voters to their cause.

What are we to make of these mixed empirical results? In truth, they are to be expected given the theoretical tensions. The theories say that governments have incentives to target swing voters in order to buy their votes while they also seek to bolster turnout and prevent new parties among core voters. The large body of empirical evidence also seems to show that they do both depending on the context. First, a great deal of evidence shows that governments target core groups and districts. Meanwhile, the fact that we also observe

swing voters rewarded in a large number of tests suggests that governments distribute to persuade by targeting swing voters; otherwise we would expect to see only core voters targeted in empirical results since other distribution unambiguously targets core voters. This also corresponds with most recent results suggesting that the reward of core voters is driven by governments' mobilization motivation rather than persuasion.

Taken together, this evidence suggests that a more nuanced theoretical approach is warranted. I argue that instead of expecting governments to make a false choice between targeting only core or swing voters, we instead should expect that both groups will be targeted in different circumstances. In doing so, I join a group of scholars arguing for a contextual understanding of distribution to swing and core voters (McGillivray 2004, Dunning & Stokes 2007, Diaz-Cayeros 2008). Governments consider all three motivations for distribution simultaneously. Moreover, there is no reason to believe that governments have such restricted resources that they may only target one single group of voters. Instead, they target different types of voters with health improvements depending on the electoral context.

Rewarding Government Supporters

I hypothesize that governments focus their health distribution efforts on core voters in order to mobilize voters and prevent new parties in districts with greater government support. Health resources spent for coordination and mobilization purposes will be more effective when spent in areas with more government voters versus areas with marginal or weak support for the government. As result, I anticipate that government strongholds will receive more health resources.

Governments seeking to coordinate their voters and neutralize policy entrepreneurs target areas with many core party voters. Since physical safety is a high voter priority, promises to improve health conditions could easily generate new parties, a dangerous possibility for incumbent parties in government. In fact, the early history of developed democracies, as we will see in the French case, is fraught with the emergence of new left socialist and communist

parties who sap voters from existing parties using party platforms of improved health and welfare. Such emerging parties are most dangerous to governments in the areas they draw heavier support from, where new parties could potentially rob them of their core electoral strength. By contrast, new parties forming in electorally weaker government districts are not terribly dangerous: new parties in areas with few government supporters would need to form part of their base from other parties in the district in order to be electorally viable. By keeping stronger pro-government areas satisfied with health resources distribution, the government prevents entrepreneurs from capitalizing on any dissatisfaction.

Governments also target areas with high government vote share in order to mobilize core voters. Poor health has a direct and profound effect on party mobilization in the short and long term: the sick and dead do not vote. In order to sustain high turnout and government support, government parties will attempt to protect their core voters with health resources through distribution. They specifically target districts with more government support due to the positive externalities associated with improved public health. Each health dollar spent in areas with strong government support will reach and benefit more pro-government core voters and encourage them to turn out. It may even directly protect supporter security by preventing disease and infection in their district. Distributional health spending in other areas would be likely to protect many other parties' core voters and make them more likely to turn out. This would be a counterproductive distributive tactic. As a result, seeking to maximize the political impact of their distribution, governments send health resources to mobilize core voters where those resources have the highest likelihood of reaching their own voters, in areas with higher government support.

Swing Voters in Strategically Important Areas

Parties in power, however, will not ignore investments in persuading swing voters. While they shore up their support among core voters in areas with many of their supporters, governments also attempt to buy swing votes as well. In anticipate that governments target

swing voters in strategically important districts, determined by electoral institutions. In such districts, governments will deliver health resources even though there is a potential to politically waste them on other parties' core voters. This is because parties want to win elections and pass policy, not just win votes. In strategically important districts, persuading even small numbers of voters to change their vote using targeted health can change electoral outcomes.

The incentives to target swing voters in districts are conditioned by political institutions. Politicians face strategic incentives to target electoral districts where a few swing voters can turn an election. Electoral institutions create this distributive incentive. A variety of institutions translate votes into seats and parties seek to target swing voters in critical electoral districts when distributing policy in order to maximize seats (Taagepera & Shugart 1989, Lijphart 1999). McGillivray (2004) provides insights into the effect of political institutions on distribution incentives along with work on district magnitude by other scholars (Austen-Smith 2000, Persson, Tabellini & Roland 2000, Rogowski 1989). In single member district (SMD) systems and low magnitude proportional representation (PR) systems, parties target competitive districts with distributive goods in order to maximize potential seat gains—the vote of a voter in a swing district is more valuable than a voter elsewhere. Denmark (2000), for example, predicts the distribution of funds in the Australian case and finds that competitive marginal districts received benefits. In large magnitude PR systems, by contrast, politicians do not face these district incentives since votes count equally or nearly equally. Empirical work in PR systems like Germany find that there is no evidence that PR elected deputies have geographic interests in distribution (Stratmann & Baur 2002). In SMD systems, I therefore expect the government to target health policy at swing districts with close races. Politicians will reward districts characterized by highly competitive races with many swing voters with additional health funding to change votes and through them, electoral outcomes. On the other end of the institutional scale, in high magnitude PR systems, I expect no such effect.

In addition, legislative conditions also determine the strategic importance of swing voters. Some districts, despite supporting parties out of government, may be more politically important due to the nature of their representation in the legislature. Specifically, voters represented by pivotal legislators command extra influence in the distribution game (Krehbiel 1998). Pivotal legislators represent the median legislator. In many democratic systems, passing policy requires winning the support of the median legislator. Often, this will require paying that party or legislator's voters off with particularistic policy. In the United States, this takes the form of policy provided to the constituents of strategically important moderate legislators. In circumstances like that of the French Third Republic, one of this project's cases, the pivotal legislator undoubtedly represents the Republican, Radical and Radical Socialist Party who, even when not in cabinet, was the fulcrum of virtually every parliament during the late Third Republic. Due to the strategic importance of the median party and legislators, I expect governments in power to distribute health funds to any pivotal party supporters in order to gain their representatives' support for policies.

Health Partisanship

The partisanship of health plays a vital role in determining how much is spent on health resources and where those resources are distributed. Different parties have varied approaches to issues, changing spending and distribution priorities when they are able (Levitt & Snyder 1995, Bickers & Stein 2000, Iversen & Soskice 2006). Parties that are ideologically committed to increased health funding use it as a distributive tool while in government and work disproportionately to bring home improved health resources even when not in government. Many left parties, in particular, emphasize social spending on health as part of their party identity and platform. Evidence shows that expansions of national health policy in Europe, for example, can be explained by left party strength and presence in government (Freeman 2000). It is important to note that it is not only having unhealthy constituents that generates these distributional pressures. In fact, many right parties have unhealthy constituents with

extremely poor health, such as poor conservative farmers in most modern developing and early 20th century developed democracies. Parties representing poor health constituencies may not affect health distribution if they do not also give health high priority in their platforms. Instead, it is the combination of constituents with health concerns and a party that explicitly represents those concerns by pushing for social welfare and health spending that defines pro-health parties. I anticipate that pro-health ideology parties alter spending in two ways: aggregate increases in funding for health resources when in government and securing increased health resource distribution to areas heavily populated by their party supporters at all times, in or out of government.

Since governments have the most power over how much is spent on health, I expect that the ideology of parties in government plays a central role in health resource spending. Parties prioritizing greater health spending in their platforms will spend more when in power. In the modern era, ideologically left parties in government drive health spending and lower mortality in democracies (Alexander 2008). Pro-health left parties will therefore spend more on health across the board in order to benefit its own poor health constituents disproportionately when in power.

Even if they are not in power, pro-health parties alter the distribution of health resources. These parties and their voters place an especially high value on health resources. The high salience of health to pro-health parties means that governments of other ideologies can buy them off efficiently using health resources. In Europe, for example, welfare state policies were often created by bourgeois or reactionary governments to pacify and satisfy left constituencies of workers and peasants, such as Bismarck's great social insurance programs in the late 19th century (Baldwin 1990). Pro-health reform parties were "invariably" left parties in Europe during the 20th century, for example, and they exploited low levels of party competition on the issue of health to legislate their preferred policies (Freeman 2000, 25). Governments can use health as a relatively cheap form of particularistic government policy to gain support or concessions from pro-health party legislators and voters. Consequently,

the ideological preference of pro-health left parties to improve health will manifest itself in increased distribution of health resources to more heavily left areas, regardless of what parties are in power.

Representation

An area's political importance is defined not only by its partisanship or strategic importance but also by the legislators who represent it. To secure their reelection, legislators want to improve public health, prevent major disease outbreaks in their districts and generally protect voters' physical security. As a result, legislators use their power within legislatures to bring home health resources where possible. Even otherwise unimportant districts may receive disproportionate health resources due to the qualities of its legislators. I contend that two legislator characteristics determine their ability to bring acquire higher transfers of health resources for their districts: power and expertise.

Depending on the institutional context legislators operate within, legislator power can take various forms (Cox & McCubbins 1993, Levitt & Poterba 1999, Aldrich & Rohde 2001, Golden & Picci 2008). In political systems like the United States, individual legislators with seniority or well placed in legislative leadership positions hold the institutional powers to bring more resources back to their home districts. Legislators in leadership or powerful committee positions sit at the top of the party and legislature's hierarchy. Members with this organizational and agenda setting authority gain advantages that junior and undistinguished members do not have. Similarly, in parliamentary systems, frontbenchers with portfolios have more capacity to make policy and affect decisions that benefit their districts. Meanwhile, legislators at the top of their electoral lists in PR systems tend to have more say over policy matters. Use of these additional legislative powers extends to health resources as well. I anticipate that legislators use their powers to get more health resources for their districts and ensure better public health.

In addition, legislators with specific policy expertise in health also have an advantage

Table 2.2: A Theory of Health Distribution

Theory	Targeting	Motivations
Government Support	Core Voters	<ul style="list-style-type: none"> • Mobilization • Coordination • Maximize positive externalities
Strategic Importance	Swing Voters	<ul style="list-style-type: none"> • Persuasion • Electoral Institutions • Pivotal Voter/Legislator
Health Partisanship	Pro-Health Parties	<ul style="list-style-type: none"> • Pro-Health Government Control • Pro-Health Electoral Strength
Representation	Legislators	<ul style="list-style-type: none"> • Power • Health Expertise

over their peers in securing health resources for their districts. Legislators specialize in issue areas, gaining an informational advantage, and in response the rest of the legislature defers to these specialists on those issues (Krehbiel 1992). Previous work on the United States Congress, for example, indicates that specific committee membership enables legislators to acquire additional resources in their expert issues to their districts (Rundquist, Lee & Rhee 1996). Individuals are either preselected for their expertise in these areas or simply build expertise on the job in their committees and subcommittees. Outside the United States, evidence shows that specialists also matter, such as the specialist doctors at the forefront of writing bills and advancing public health in the French Chamber of Deputies (Ellis 1990). Experts are better able to manipulate health bureaucracies and systems to their advantage because of their familiarity with and specific expertise in the public health system. Depending on the institutional context, this may include doctors, cabinet ministers, members of various committees with health oversight or former health bureaucrats. I hypothesize that expert representatives with an extensive knowledge of the health field or oversight of health institutions bring additional health resources to their constituents.

2.3 Case Selection: Testing the Distributional Theory of Health Resources

I perform qualitative case studies and subnational quantitative tests on democracies facing health threats in order to test the explanatory power of this framework, which is summarized in Table 2.2. For research design reasons, I first focus on a particular subset of democracies: late 19th/early 20th century democracies: the French Third Republic (1910-1940) and the United States (1900-1950). Then, I test the theory in a modern developing country, India (1971-1999), to establish the validity of my theory in the modern context.

I choose historical cases, as opposed to focusing solely on modern democracies, because they enable me to test the distributive theory of health in an environment that is causally uncontaminated by international organizations. Virtually all modern developing countries in health crises receive resources from outside sources, often substantial sums matching or amounting to several times domestic spending. This is consequential because international organizations introduce a set of incentives into distributive health politics exogenous to domestic political incentives. Untangling those incentives from domestic incentives is extremely difficult. In particular, it requires a full theoretical and empirical model of both donor interests and the complex interaction of donor interests and domestic politics, since donors and domestic governments do not necessarily seek to spend health resources on the same populations.

Donors have distinctly different interests than domestic governments in the treatment of health which affects their health aid donation behavior (Steele 2011). Even within donors there are a variety of conflicting interests. Bilateral donors have significantly different priorities in funding health than religious NGOs, for example. Taken together, donor interests are usually focused on threats to global public health (WHO 2002, Smith, Beaglehole, Woodward & Drager 2003). Global public health is most threatened by diseases that spill over borders and threaten other states' security. That means that global pandemic health threats

like HIV/AIDS and severe acute respiratory syndrome (SARS) receive huge resources while threats causing more misery like malaria but that are not a threat to neighbors and donor countries are, historically, greatly underfunded. Since donor funding is often based on conditionality, domestic politicians must change their distributional behavior in response to these donor interests. Furthermore, since domestic governments are forced to target groups donors prefer, resources may target groups that would otherwise be ignored. They may make health distributions that cut against the grain of domestic political incentives. In fact, the priorities of modern domestic government health resource spending becomes even more complex when we consider the interaction and potential crowding out of domestic health resource allocation by international funding. Recent quantitative evidence from Lu, Schneider, Gubbins, Leach-Kemon, Jamison & Murray (2010) indicates that using conservative models on a sample from 1995-2006, every dollar of health assistance given to domestic governments by international organizations was associated with a decrease in domestic health budgets of 46 cents. Understanding the modern developing world cases require an incredible knowledge of international and domestic political incentives and how they interact.

Instead, for the first two cases, I sidestep this thorny issue with case selection. Early 20th century developed democracies faced chronic health problems and mortality crises from a wide variety of diseases, comparable to, if not greater in scope than, modern developing democracies. Spanish Influenza, for example, struck Western Europe and the United States in 1918-1919. It killed approximately 700,000 and infected about a quarter of the population in the United States alone (Crosby 1976, Pyle 1986, 206). While quite a different disease profile, its scope closely parallels the 18.1% infection rate of the HIV/AIDs pandemic in 2007 South Africa (UNICEF 2010). Aggregate mortality rates are also broadly similar. The median department mortality rate in France in 1910 was 18.1 individuals per 1000. Similarly, in 1910 the median state mortality rate in the United States was 15.5. To give a modern analogue to these statistics, the UN estimates that from 2005-2010 the least developed countries had a death rate of 11.4 while Sub-Saharan African experienced death rates of

13.9 (United Nations Population Division 2010). Furthermore, the health threats faced in 1910 and 2010 are very similar in modern developing democracies and early developed states. The same causes threaten voters with morbidity and mortality. With the rare exception of new diseases like HIV/AIDS, nearly all the scourges of the developing world would be familiar to early 20th century developed world public health officials: TB, parasitic diseases, fevers, malaria, inadequate sanitation and poor public safety. In short, my case selection allows me to test health distributive theory in countries facing analogous health problems to modern developing democracies without the causal contamination of international influences. I argue that they provide parallel health cases to the developing world.

Testing the theory on these democracies is advantageous in other respects as well. Third Republic France and the United States feature a long time series and frequent changes of government. This creates variation in the parties distributing health policy and districts benefiting from distributive politics. These democracies are also well documented, with reasonably comprehensive electoral statistics, adequate state capacity and relatively mild levels of outright electoral fraud. Coverage of mortality outcomes is excellent, reflecting contemporary statisticians' intense interest in demographic information.

Finally, I turn to a modern developing democracy, India from 1971-1999. I apply the theory developed here to the politics of spending and infant mortality in Indian states. In order to minimize the impact of international influences, Indian tests focus on the period before the explosion of international health aid. The Millennium Development Goals in 2000 galvanized international organizations to direct their efforts toward human well-being outcomes. In the case of health, this meant a substantial increase in the effort to identify, measure and fund improved health in India and elsewhere (Murray & Evans 2003). In India, this meant an increase in attention to the provision of health to individuals and international interest in helping fund health interventions to narrow health inequalities (Deolalikar 2005). The years of my analysis fall before this recent trend of international spending on human development outcome based programs like health, minimizing the causal contamination caused

by international spending. While India garnered significant aid money before 2000, the vast majority of that aid was on non-health economic and social spending (OECD 2011). This case selection allows my project to use India as a quantitative case to reinforce the generality of my health distribution framework to the modern context.

Taken together, these three cases provide a platform to test the effect of distributional politics on health outcomes. Politicians in France, the United States and India faced many of the same domestic constraints that politicians in Africa, Asia and South America face today. Conclusions drawn from the testing done here hold significant validity for current health policy makers, both domestic and international.

Chapter 3

Third Republic France 1910-1940

Third Republic France provides an ideal case to test a distributive theory of health resources. State public health responsibilities expanded greatly during the period, sponsored by both right and left governments. The French socialist party, the Section Française de l'Internationale Ouvrière (SFIO), and French Communist Party, both parties who emphasized greater health protections by the state, rose to prominence. Systemically, French deputies were extremely sensitive to their constituents and not shy about introducing particularistic policy. Finally, the French health system became increasingly centralized during the Third Republic, giving French politicians the opportunity to manipulate the flow of health funding to districts. All these factors suggest that French political conditions were ripe for health resource distribution.

I begin my analysis by describing the features of Third Republic politics in order to establish the basics of the French case. I then assess qualitative evidence, discussing the politics of public health spending during the Third Republic. I focus in particular on the expansion of health assistance for the poor in France and the prominent role of distributive politics during the battle for a state sponsored mandatory medical insurance system.

Next, I turn to empirical evidence of health distribution in the Third Republic. I perform tests evaluating the distributive theory of health introduced in Chapter 2 on France. First, I directly predict French spending on medical assistance to departments using electoral variables from 1910-1940. To supplement these results, I then predict mortality outcomes as a consequence of that medical assistance spending, controlling for other factors influential in mortality rates and the endogeneity of mortality rates and health spending. I find that

the Third Republic provides highly supportive evidence for the distribution of health in democracies, concretely linking changes in political conditions to changes in health funding and, through them, to mortality outcomes. The size of these effects are substantial and played a role in determining the health of the French population at the subnational level.

3.1 The Third Republic Political System

Before considering the evidence of distributive health politics, it is important to become familiar with the Third Republic political institutions, party system and resulting incentives faced by French deputies. This gives context to the qualitative and quantitative environment where the distribution of health took place.

Political Institutions

The French Third Republic was the first democratic system in France with any kind of longevity. It had its roots in the turbulent tradition of republican France, tracing back to the French Revolution. In 1870, the disastrous Franco-Prussian War and widespread discontent with the ineffective rule of Napoleon III led to the establishment of a fully democratic system with only sketchy institutional rules. These democratic rules were repeatedly confronted with political crises during the early period of the Third Republic such as the *seize mai* (1877), Boulanger affair (1886) and Dreyfus affair (1894), which led to the institutionalization of a more formal set of rules governing democracy in France (Anderson 1977, Mayeur & Reberieux 1984). The resulting democratic institutions governed political competition in France until the Third Republic's fall in 1940.

The French state was divided into three levels of administration—nearly 90 departments (less during WWI German occupation), hundreds of districts (*arrondissements*) and over 30,000 communes. Day to day administration of the French state was highly centralized in national ministries and administrators in Paris. Elected mayors and lower level municipal

councils were beholden to the central state. While local officials could propose legislation, all significant policy changes required approval by centrally appointed prefects. They could veto virtually all decisions by municipal councils including local budgets. Of particular note for the distribution of health, lower levels had no power over poor relief and little power over most social service issues (Hutton, Bourque & Staples 1986*b*, 426).

Politically, Third Republic France, although in truth a two chambered regime with a president, functioned largely as a one chambered parliamentary regime. The directly elected Chamber of Deputies formed governments, appointed ministers and wielded power over bureaucrats. The Chamber was “the center of French political life from the first election in 1876 until... parliament conveyed power to Marshal Philippe Pétain in July 1940” (Hutton, Bourque & Staples 1986*a*, 176). Due to the political dominance of the Chamber of Deputies, my analyses focus primarily on the incentives and powers of the Chamber of Deputies to distribute health resources.

Voting in elections to the Chamber of Deputies in the Third Republic was open to all males. By rule, elections occurred every four years and dissolutions of parliament did not lead to new elections but only to new government formation. Elections were held in two round single member districts, the *scrutin d'arrondissement*, save for a brief foray in proportional representation.¹ Candidates receiving a majority of votes in the first round would win outright; if no candidate received a majority, a second round would take place. There were no official rules dictating which candidates would enter the second round but norms generally dictated that the top two vote receiving candidates would continue to the second round. The second round, therefore, was the subject of much party and candidate bargaining. Which candidates would drop out of the race for the second round and whom voters supporting dropped candidates would then vote for often decided the outcome of the race. Departments contained varying numbers of electoral districts and, overall, the Chamber itself had around 600 members. As few as 2 (Belfort) or as many as 60 (Seine)

¹For a detailed analysis of the electoral system and individual elections, see Campbell (1958).

deputies could represent a single department, depending on population size. Nevertheless, the majority of departments contained only 4-8 electoral districts.

The other elected institutions in the Third Republic were far less powerful. The Chamber of Deputies elected a president to a seven year term. In practice, the office had few powers because of the latent French fear of executive powers save the ability, with the assent of the Senate, to dissolve the government (Pierce 1973, 25). This almost never occurred due to the president's reliance on the lower chamber for election and the Senate's fear of executive power. The Senate, for its part, was elected to nine year terms by departmental constituencies with a minimum of 2 senators per department and a maximum of 5. This disproportionality meant that it tended to be more conservative and represented more rural interests than the Chamber of Deputies. The Senate rarely created legislation and focused on its amendment powers. Its primary power was its prerogative to dissolve the government (Hutton, Bourque & Staples 1986*a*, 926). Even if it did dissolve the government, however, no new elections would be held, further limiting even this power.

Governments, once formed by the Chamber of Deputies, were incredibly short lived, averaging only eight months (Pierce 1973). This excessive amount of cabinet instability, however, belied a more traditional stability of political parties in government. "Parliamentary rule under the Third Republic was a complicated blend of stability and flux.... governments tended to be simple rearrangements of the same parliamentarians" (Haine 2000, 123). Though the names of ministers may change, the parties in power changed far less frequently.

The Party System

Third Republic political competition and legislative organization took place within political parties. Specific party identity among candidates, especially on the right, was relatively weak. Candidates would go into successive elections under different party names, albeit usually belonging to the same party grouping. Left parties, by contrast, were far more organized and consistent in their party identity, with all candidates using the same party

Table 3.1: Third Republic Political Groupings

Grouping	Social Position	Economic Position
Right Republicans	Republican and Reactionary	Liberal Economics [†]
Moderate Republics	Republican	Liberal Economics [†]
Independent Radicals	Egalitarian Republican	Liberal Economics [†]
Republican, Radical and Radical Socialist Party	Egalitarian Republican	Liberal Economics [†]
Independent Socialists	Redistributive Republican	Statist Economics
SFIO	Redistributive Republican	Statist Economics
French Communist Party	Revolutionary	Statist Economics

[†] Liberal here refers to the classic definition of liberal—non-interventionist laissez-faire.

* Bernard & Dubief (1985, 148-170) and Anderson (1977) form the basis of this classification.

names, labels and party platforms. I identify seven different party groupings in the historical election data, with hundreds of different name variations. I will discuss each group in turn and summarize the political groupings in Table 3.1.

The various forms of right republicans (e.g., Conservatives, Republican Federation, Republican Democratic Union (URD)) were quite conservative. Many right republican voters were critical of democratic principles and disliked the core institutions of the republic (Bernard & Dubief 1985, 159-160). They stood solidly in opposition to programmatic expansion of social programs. The right republicans were committed classic liberals and highly fiscally conservative. They also advertised themselves as aggressive nationalists and extreme groups called *ligues* manifested fascistic characteristics, occasionally taking violent action against the government, especially in the 1930s.

The moderate republicans (e.g., Democratic Alliance, Republicans of the Left, Independents of the Left), by contrast, were ideologically conservative but committed to the continued existence of the republic. They shared the fiscal conservatism and economic liberalism of the far right but were invested in the status quo of republicanism. They accepted the financial contributions of big business during election campaigns and were supported by

the upper and middle class (Bernard & Dubief 1985, 161). Because of their position near the middle of the political spectrum, the moderates were involved in many governments and generated some of the most famous politicians and prime ministers of the late Third Republic like Poincaré and Tardieu.

The Republican, Radical and Radical Socialist Party was the most important party in the French Third Republic.² A radical socialist leader summed up the parties' policy positions in a famous quip: "my heart is on the left but my pocketbook is on the right!" (Hutton, Bourque & Staples 1986*a*, 829) They stood at the center of the French political spectrum, relatively fiscally conservative but socially egalitarian. They were supported primarily by small businessmen, shopkeepers and held a strong following among the rural petty-bourgeois and farmers. The radical socialists were also an organized national party and ran together in elections, as opposed to the rag-tag organization of the right groupings. Even so, radical socialist discipline in legislature was relatively low (Wright 1995, 329). Standing at the ideological and legislative center meant radical socialist support for any government or candidate was vitally important and they were the "fulcrum of Third Republic coalition politics" (Jones 1994). The independent radicals were very similar to the radical socialists in ideology but remained outside of the official radical party hierarchy—they were not bound by radical socialist leaders and platforms. They were slightly more laissez-faire economically and conservative socially than the larger official party and stood between the moderate republicans and the radical socialists. In elections, they often ran separately from the radical socialists under a variety of different names (e.g., Independent Radicals, Radicals of the Left).

The French socialists, the SFIO, formed the core of the far left in parliament under the leadership of Léon Blum. After its unification in 1905, bringing together most of the disparate socialist groups, the SFIO maintained very tight party discipline in electoral races and parliament. SFIO candidates ran in the first rounds of virtually every district. SFIO

²I will refer to the Republican, Radical and Radical Socialist Party simply as the radical socialists from here on.

ideology supported expanded social programs and a statist economy along with stronger worker rights. While their core constituency was workers and occasionally peasants, the SFIO began to increasingly pick up middle class support after World War I because of voter disgust with inter war economic troubles (Bernard & Dubief 1985, 157). Unlike the French Communist Party, the SFIO was committed to democracy and the republic and did not take significant direction from Moscow. While they technically held true to a commitment not to join “bourgeois” governments, in practice, they functioned as a government party by supporting radical governments in power and negotiating shared policy platforms with the government (Wright 1995, 335,355). Like the independent radicals, the independent socialists took many of the same views as their ideological cousins, the SFIO. They were slightly more economically liberal and less statist. The main difference between the two was that parties in the independent socialist umbrella did not belong to the rigid SFIO party organization and were outside the control of the socialist leadership. They ran under a number of different names and ran in elections independently outside the party discipline of the SFIO (e.g., Republican Socialists, Independent Socialists).

The French Communist Party emerged as a power in French politics during the Third Republic. The communists formed after a split from the SFIO in 1920 at the Congress of Tours, where the communists supported revolutionary regime change and continued connections with the Communist International in Moscow. Like the SFIO, the French Communist Party’s platform issues were social programs and workers’ rights. Where the SFIO expanded its electoral appeal to the middle class, the communists kept their support in traditional areas of strength, especially among urban workers. The communists disdained democratic politics. They refused to participate in governments or coalitions until the 1936 Popular Front, only then doing so because of a change in policy at the Communist International (Bernard & Dubief 1985, 294). In parliament, their delegations were usually small (10-25 seats) but influential because of their ties to large populations of workers outside of parliament. In the streets, the Communist Party was very powerful, organizing crippling general

strikes, street protests and, occasionally, violent unrest.

Deputies and Particularistic Politics

A final characteristic of the Third Republic political system necessary for understanding health distribution was the nature of French deputy incentives. The French Third Republic featured extremely close ties between legislators and their constituents:

In theory, French deputies represented the whole nation rather than a particular region or group. In practice, the usual electoral system—the single member constituency, double-ballot system—encouraged deputies to cater to local interests. Deputies maintained close contact with their constituencies through correspondence and intervened with the administration to secure favors and services for their voters.... Deputies shared with the ministry the right to initiative legislation, and individuals exploited it with floods of private bills (Hutton, Bourque & Staples 1986*b*, 277-278).

Historical evidence indicates that constituency service and particularistic politics were the order of the day. This was exacerbated by relatively weak parties. Party membership could be fluid, especially on the right. In fact, Chamber of Deputies institutional rules only forced French deputies to sit with a single party in 1910; previously they could belong to multiple parties and switch between them while in parliament (Duverger 1958, 21). This made deputies use particularistic policy to ensure reelection instead of relying strictly on ideology and party identities. Combined with the centralized powers over the administration of the state in the Third Republic, there was ample motive and opportunity to distribute health benefits to targeted constituencies.

3.2 The Distributive Politics of Medical Assistance and Medical Insurance in France

Politics in the Third Republic were tumultuous.³ Power passed between a coalition of right republican parties and alliances of left radicals and socialists multiple times. Health and social policy stood near the center of the policy disagreements between the major parties. I focus on two forms of health policy: direct central state health assistance and the fight for expanded state health insurance. Funding levels for medical assistance fluctuated throughout the period while a variety of legislation attempted to alter the distribution of funding to different constituencies. Meanwhile, in the battle for a comprehensive system of health insurance, government politicians consistently manipulated legislative processes in order to target core voters in areas of electoral strength and win swing voters in upcoming elections. They timed votes before elections, made changes to the terms of the bill and stalled to avoid governments composed of left parties in order to ensure the final bill benefited their politically important constituents as much as possible.

While the period I discuss begins in 1910, the programs that form the basis of French health policy and politics were established in the late 19th century. French health conditions, on the whole, lagged well behind many of their Western European counterparts. The upper and middle classes relied on a form of private insurance, the mutual societies. These were private health insurance clubs, often run by employers or the upper class, to provide for middle class and urban worker health care in cases of emergency. The poor relied on private charity to cover their health problems. It became clear by the end of the century that this was wholly insufficient and the radical socialists in the early Third Republic saw a need for some form of health assistance, particularly to cover their under served

³One can consult a variety of excellent English language histories of the Third Republic for more information on political conflict in the period (Anderson 1977, Bernard & Dubief 1985, Mayeur & Reberieux 1984, Wright 1995, Haine 2000). The narrative presented here represents a synthesis of the political literature with histories of health and welfare in the French Republic (Smith 1998, Weiss 1983, Nord 1994, Dutton 2002, Smith 2003, Ramsey 1994, Porter 1999, Rosen 1958).

poor rural constituents (Weiss 1983, 62). In order to protect these core voters they drafted and passed the Medical Assistance Law of 1893 and in 1905 expanded that law to include the aged. Moderate republicans, requiring radical socialist support to sustain governments, grudgingly passed these measures. The assistance law covered individuals unable to pay for care, creating a centralized bureaucracy under the Ministry of the Interior. Medical assistance later came under the control of the Ministry of Health in 1920. These ministries distributed state, department and local funds, along with charitable donations, to departments to fund hospices, clinics and hospital care. This form of health funding was called *Assistance Médicale Gratuite* (AMG).

The Chamber of Deputies held elections in 1910 and 1914. These elections were notable for an excellent showing, 75 and 103 seats respectively, by the newly unified SFIO (1905).⁴ The SFIO remained out of government, however, and a series of radical and radical-moderate republican governments governed France until the outbreak of World War I. These governments remained largely unsympathetic to the poor health and social conditions of the French lower class and workers, providing minor voluntary pension reform and some new work regulations while crushing any strikes or unrest. Most Frenchmen, workers and their betters alike, continued to rely on mutuels for their health care needs, as they did not qualify for AMG.

The onset of World War I shook the French Republic politically and socially. French politicians formed a new unity war government, the Union Sacrée. Even socialists were brought into cabinet positions and all French parties agreed to join the war effort and restrain civil unrest. The Union eventually settled into the near dictatorial leadership of the radical Clemenceau, who kept the fraying French war effort afloat. The Union Sacrée lasted until 1919 when the SFIO dropped out of the government and resumed their place in the opposition. Domestically, World War I strained health and social resources. Death and disease stalked the home and war front while war spending crowded out domestic spending

⁴I use Campbell (1958) for specific estimates of electoral outcomes.

and social reform stagnated.

The aftermath of World War I called the French state's minimal role in health and social affairs into question. Veterans returned home in desperate need of medical and social assistance but found only the bare bones system of poor and aged relief in place. Explosive political conditions among the militant left, including the SFIO who had just dropped out of the governing coalition, characterized 1919 and 1920. Frustrated workers organized a series of crippling general strikes, protesting wartime deprivation and new peacetime inflation caused by soaring government debts. They demanded that the rich fund reconstruction themselves.

The 1919 postwar elections took place in the shadow of this unrest. The right and moderate republicans ran united against what they considered the SFIO menace. Strong nationalist feelings in the electorate drove the radicals from their position in the center to enter the right's electoral coalition, known as the National Bloc. The National Bloc demonized the left, depicting them as unpatriotic anarchists and as murderers and thieves with knives between their teeth. In the election itself, returning soldiers were swept up in nationalist fervor and deputies of the National Bloc won a crushing victory over the left, winning 475 seats. 1919 was a remarkable election in other ways, as well, as Stuart (1920) notes:

The new chamber contains 626 deputies, and over half of its number have been elected for the first time. Eighty-three members of the old chamber were killed in battle, and a large number of the others did not enter their names for reelection. Among the noteworthy features of the installation of the new chamber was the reappearance, after forty-eight years, of deputies from Alsace-Lorraine. The first session of the new chamber, on December 8, was, however, the occasion, not only of a rousing welcome to the twenty-four deputies from the regained provinces, but also of a vociferous demonstration against the Socialists. It was only after a quarter of an hour of loud jeering that M. Albert Thomas was able to read the Socialist declaration.

There were so many new faces in the Chamber, many of them WWI veterans, that the new chamber was called the *bleu horizon* chamber, after the deputies' blue military uniforms.

The republicans and radicals, despite their historic electoral victory over the socialists, realized that they could not govern in the context of general strikes. To "calm the wave of working-class unrest" they passed a number of pro-labour reforms (Haine 2000, 144). The right leaning government then used the issue nearest and dearest to socialist hearts as leverage over the left: medical and social insurance. In 1920 they initiated the process of creating limited social insurance, the core of which was a system of mandatory medical coverage for workers, partially paid for by the state, in order to most buy off socialist voters and prevent unrest. In its scope and impact, it was the most significant piece of medical and social legislation in the 70 year history of the Third Republic. The circumstances of the bill's creation illustrate my theoretical prediction regarding the role of partisanship in health distribution: the government bought off SFIO voters using improvements in health, ending general strikes and undercutting the rising socialist support of 1910 and 1914.

The story of the insurance bill's passage, however, was a torturous ten year process wherein the right worked tirelessly to politically outmaneuver the left, ensuring that the resulting health insurance and assistance program best served their constituencies rather than the left's. In March 1921, the National Bloc Ministry of Labour unveiled the Vincent bill, drafted by radical politicians and named for the labor minister. The Vincent bill provided medical, disability and pension programs to many workers. It also gave small business owners, shopkeepers and other middle class, a core radical constituency, the option to opt in to the program voluntarily. It was a pay-as-you-go plan, with employees paying part of their wages and the state paying its own stake into regional *caisses*, which then paid medical expenses when needed. Shockingly, it virtually shut out the old regime of mutuals, which were controlled by rich capitalists and employers. The private mutual system "was to become a highly regulated appendage" and employers would be left without any control over the *caisses* where employees paid wages (Dutton 2002, 53). This hurt constituencies of the

right, the rich capitalist employers, medical professionals like doctors and the big businesses running the mutuels. The left and non-communist unions, by contrast, were ecstatic and urged its immediate passage. The social policy proposal had done its job of mollifying the pro-health SFIO. The strikes died down, even in the face of continued rampant inflation and onerous war debts. But why would the pro-business right create such a policy?

The answer was that the right refused to put the bill to a vote, at least not in its present form. Instead of passing or rejecting the bill in the Chamber of Deputies, the right-radical National Bloc coalition progressed the bill through the legislative process in an agonizingly delayed fashion. The government sent the Vincent bill into the amendment process for an interminable two years. It went through six separate committees and was “the victim of seemingly countless modifications and filibusters” (Smith 1998, 1069). Finally it landed on the desk of deputy Edouard Grinda, the man charged with producing the final report consolidating all the new amendments to the Vincent bill. In January 1923, Grinda unveiled his report, containing the revisions of the medical and social insurance plan submitted by the right republicans. The changes made in the Grinda bill were substantial and, in particular, political and distributive in nature. Having mollified the left with the early bill, the new Grinda plan contained significant changes, giving powers over the new medical insurance system to the mutuels and employers (Dutton 2002, 62). It also contained provisions making the bill more amenable to rural interests and doctors. My theory suggests both these changes were included because they were electorally beneficial, as the new version of the bill rewarded core supporters of the government and helped the right woo swing radical voters. Core republican right supporters, the upper class run mutuels and large firm employers, won by getting a lucrative financial foothold in the new insurance system. Meanwhile, a new system of medical benefits and pensions for agriculture rewarded core radical voters and helped right parties win radical votes in close rural districts where they competed in second rounds against the left.

Even with the medical insurance bill greatly changed to favor its core constituents and

radical swing voters, the government remained in an intriguing position. With the final Grinda report in hand, it had the option of passing this new policy or potentially rejecting it entirely. By this time, 1923, elections were upcoming for the Chamber of Deputies. If the right stayed in power, they could perhaps further reduce the scope of the medical insurance bill or scrap it entirely. If they lost in legislative elections, they may find it more beneficial to pass the current bill that favored mutuals, employers and rural interests rather than see the left potentially draft its own, less attractive, bill. So the government waited.

In the run up to the 1924 election the radical socialist party decided to join an electoral coalition with the socialists, winning the support of the SFIO and running together in almost all departments. Signs looked ominous in upcoming elections for the right in the face of this revitalized coalition of the left. After almost four years of stalling, the right-radical government, perhaps anticipating an electoral loss, slipped their modified social insurance plan through the Chamber of Deputies, passing the Grinda version of the bill on April 9th, just one month before the 1924 general election. The bill now required passage in the conservative Senate. The right again manipulated the political system to the advantage of their constituencies, keeping the bill in limbo in the Senate during left government.

On election day, the new *Cartel des Gauches* performed as well as expected, winning outright control of the government. The radical socialist run and SFIO supported *Cartel* government brought promises of increased health spending and pro-poor and worker spending policies. The new radical prime minister, Eduoard Herriot, was a firm believer in increased health assistance and had helped expand the state's role in the health system during his time as mayor of Lyon (Smith 2003). With the medical insurance law languishing in the Senate, the government instead focused on increasing direct spending on public hospitals and AMG. "The big step [in public hospital spending growth] took place between 1924 and 1928 before the 1928 medical insurance law was passed. A quarter of a million more people were served by the hospitals at the end of that four-year period. Previously, it had taken over sixty years from 1853 until 1911 for a numerical increase of that order" (Smith 1998,

1076). The *Cartel* government's activities hew close to my theoretical predictions suggesting that the left used health as a tool to enhance its support among core voters and focused extensively on shifting spending priorities toward health spending.

Capitalists and foreign investors, however, feared increased government spending and statist policies from the new coalition, particularly the nationalization of banks and industries combined with possible soak the rich redistributive tax policies. These investors fled the country with their capital, exacerbating an already unstable currency situation. The left government, too, became unstable. Unable to print more money to ameliorate the crisis due to conservative resistance at the national bank, the Cartel collapsed in July 1926. It was replaced by another right-radical coalition, the Union Nationale, led by Poincaré. Poincaré handled the currency crisis with aplomb, in large part because of the increased confidence the right-center government inspired in skittish investors.

The Senate, meanwhile, subjected the health insurance bill to yet more delay and revisions in the Senate. The Senate was historically more conservative than the Chamber of Deputies due to its nine year terms elected from malapportioned districts. As a consequence, the Senate experienced no commensurate left wing swing toward the *Cartel des Gauches* in 1924. In many ways, from the perspective of the right deputies who had passed the insurance bill in 1924 just before losing power, the Senate provided a temporary safe harbor for the medical insurance bill during the *Cartel* governments. The bill's continued presence in the Senate probably prevented the *Cartel* from creating an insurance bill of its own. Working extremely slowly, seven senate committees examined the bill and in late 1925 the Senate started another revision of the health insurance plan. This version, drafted by Senator Chauveau, made even more mutual friendly changes and drastically reduced state involvement in *caisses*. They guaranteed a "warm reception" from the core moderate and right republican constituents, employers and mutual societies (Dutton 2002, 103).

With the July 1926 dissolution of the *Cartel des Gauches*, however, the need to harbor the legislation in the Senate away from the influence of a left government was over. Debate

began on the amended legislation in June 1927. Again, the government manipulated the legislation's timing. Seeing an opportunity for the sure passage of the now relatively pro-right bill slipping away as 1928 general elections and their uncertain outcome approached, the government jumped into action. "The lengthening delay... and the upcoming legislative elections... led deputies to seek a quick vote on Chauveau's creation" (Dutton 2002, 103). The Senate promptly passed the bill with only 2 votes against and the Chamber of Deputies followed suit, 477-4. To maximize its electoral impact, deputies delayed promulgation of the bill until April 4th 1928, just two weeks before legislative elections, presumably in order to appeal to centrist and radical swing constituencies during elections—government deputies did not want to campaign "empty handed" (Dutton 2002, 103).

The 1928 election elections returned the right-center *Union Nationale* government to power. Most observers considered the election outcome a reward for the government's competence in handling the currency crisis. Moderate and right republicans also succeeded due to their success among swing radical voters, the same voters who would benefit from the pro-rural measures in the recently passed but not yet implemented social insurance plan. In close second round races where radical candidates withdrew in favor of socialists, many radical voters instead voted for candidates of the right. The right and moderate republicans gained "67 seats which the Left would otherwise have won," giving the right incumbent government victory (Campbell 1958, 98). Here, the right again acted according to my theoretical framework, targeting health reforms at key rural radical voters in order to win additional seats. Republican efforts to target swing voters with health reform paid off on election day in close races.

The *Union Nationale* government remained in power until the 1932 elections. The Great Depression that gripped the rest of the world did not take hold in France until 1931. The government experienced huge budget surpluses that "justified generosity" by the government (Bernard & Dubief 1985, 174). It spent this money on social programs and "personal politics," especially under prime minister André Tardieu (Bernard & Dubief 1985). In ad-

dition to public works projects, in 1930 the government finally implemented the insurance law passed in 1928. With elections upcoming in 1932, the incumbent right government attempted to again appeal to swing voters by introducing laws extending family allowances for the working poor and lower middle class.

The subsequent election took place in the shadow of an unprecedented economic depression that finally settled in France. Not even the variety of particularistic policies passed by the *Union Nationale* using the 1928-1931 budget surplus could prevent a rejection of the incumbent government. A new coalition between the radicals and the left, this time dubbed the *Union des Gauches*, won the legislative elections of 1932. This cabinet, as before, suffered from extreme cabinet instability in the face of division between the socialists and radicals about economic policy. Furthermore, they confronted an intimidating “political street” dominated by angry trade unions and a variety of far right and fascist *ligues*. In 1934, violent political conflict at the Chamber of Deputies, killing 15 and injuring 1500, toppled the weak *Union des Gauches* government. A right-radical government, the *Union Nationale*, again replaced it. Neither left or right governments had much leeway in subsequent years to consider new expansions of health policy; both faced the pressing question of what to do in response to poor economic performance in the immediate wake of the worldwide depression.

Spending policies remained at a status quo under right government while the French economy stagnated. By the 1936 elections, however, social policy again came to the forefront of electoral politics because parties ran in unified left and right electoral coalitions. The National Front brought the right and moderate republicans into a single unified coalition. The left, meanwhile, formed the Popular Front, whose party platform “include[d] a set of demands in the economic and social sphere that added up to a real new deal” (Wright 1995, 362). The Popular Front was a coalition of left leaning radical socialists, the SFIO and, surprisingly, the French Communist Party. Léon Blum and the SFIO, dominating the Popular Front, ended its long held policy of supporting rather than participating in “bourgeois” governments. The communists, for their part, for first time cooperated with

the other left parties due to changes their stance toward coalition government after a power struggle within the party. The Popular Front ran on a platform of spending increases and expansions to the medical insurance program and other social spending. It maintained tight discipline in the elections. In the face of hard economic times, French voters gave the Popular Front a comprehensive electoral victory over the National Front, 383-215.

The Popular Front launched immediate redistributive economic and social program reform, including nationalizing the Bank of France and some industry, establishing comprehensive new labour protections, and increasing wages by an average of 12 percent (Wright 1995). Health policy was no exception. The Popular Front “promoted the concept of health as a basic right” with programs combating infectious disease, especially tuberculosis (Ramsey 1994, 90). Expansion of the 1930 medical insurance program continued—by 1940 half of French employees were covered by the health care system, up substantially from the roughly one third of workers protected in 1930 (Smith 1998, 1082). In addition to protecting workers in cities, the Popular Front also paid special attention to bolstering rural voter health. These agricultural health reforms served to “reward agricultural laborers for voting on the left” (Dutton 2002, 183). This rewarded swing radical voters for their support of the left coalition, often the pivotal group in French elections. Following my distributional framework, in the two contentious years Popular Front governments operated they focused on their own politically important constituents extensively, helping urban workers and rural radical constituencies, to the detriment of the national good. They ran large fiscal deficits and eventually destabilized the French economy when capitalists began to flee.

By late 1938, the economic situation deteriorated due to profligate social spending and unity within the Popular Front fractured. Independent radicals and radical socialists fled the Popular Front into the arms of a coalition with right and moderate republicans. To close the deficit and stimulate the economy, center right government attempted to pass pro-business reform by lowering taxes on businessmen and encourage reinvestment of fled capital. In response, the left called for general strikes, which failed. Capital returned to the country

but overall the French economy remained weak after a dismal decade of economic depression. Shortly after, the World War II German invasion of France ended the Third Republic regime and inaugurated a new authoritarian regime under Marshal Pétain.

Qualitative Conclusions

The history of medical insurance and medical spending in France illustrates the utility of health as distribution for legislators. During the late Third Republic, successive governments changed the distribution of health funding when they took power, culminating in massive increases in AMG and other relief spending on health by the Popular Front in 1936. This money targeted core constituencies like workers when the left took power. Right governments, for their part, made sure that business owners and upper class voters got part of the funds by giving private mutuals a strong hand in the control health insurance funds. Both left and right governments focused on expanding health care to include radical supporters, as these swing voters proved critical in legislative elections. When races went to the second round, centrist radicals usually decided the outcome in favor of the right or left depending on their choice of second round candidate. In 1928, for example, this decided control of 67 seats and as a result, the control the government. As a consequence, the historical record indicates that all governments sought to give material health improvements using AMG to poor rural radical constituents.

The politics of the medical insurance bill is also an excellent illustration of health distribution theory at work. The theory I developed outlines three simultaneous incentives in the distribution of health: legislators will seek to serve satisfy large groups of their core voters, they will target electorally important swing voters and they will compensate ideologically pro-health parties outside the government with health distribution. The right-center governments in control of the health insurance reform bill did all three of these things throughout the 1920s. They went to great legislative lengths to keep left parties or governments from claiming any credit or exerting any control of the bill. First, when potentially crippling

general strikes initiated by trade unions and the SFIO threatened the government, the right-moderate republican government used health protection promises for workers to pacify left voters. They utilized the socialist pro-health and social welfare party identity to buy off the left. Then, the government buried the bill for almost four years before passing it, making changes to the bill to benefit its significant core big business interests, mutuals, employers and doctors. Finally, the new bill also contained an expansion of rural medical benefits, a sweetener for the swing radical vote, needed during second round electoral races.

Furthermore, it seems no coincidence that both health insurance votes in the Chamber of Deputies happened immediately before elections. The first, before the 1924 election, sent the bill to the conservative Senate. This served to keep it out of the hands of the incoming left coalition government but simultaneously made it available for credit claiming among the swing radical voters during the 1924 elections. The bill was brought back from the Senate after further pro-republican core interest revisions, and then only after the dissolution of the left coalition and reimposition of right-radical government. It was then suddenly rushed into passage and promulgated only a few weeks before the next election, again to gain radical swing votes in the 1928 election. In sum, the qualitative case of medical insurance provides supporting evidence for the distributional theory of health advanced in Chapter 2.

3.3 Predicting French Health and Mortality from 1910-1940

Building off the suggestive qualitative evidence of the use of health resources as political distribution in France, I perform quantitative tests of the hypotheses generated from the theory developed in Chapter 2. I find robust, widespread empirical support for my hypotheses anticipating that departments supporting the current government more strongly, strategic districts, pro-health parties and better representation led to increased funding by *Assistance Médicale Gratuite*, a health relief measure for the poor. This evidence shows that systematic

inequalities created by perverse political incentives altered the distribution of health relief for the poor in democratic France. In addition, after controlling for the endogeneity between health spending and mortality, further testing links increased health spending on *Assistance Médicale Gratuite* to decreased mortality in departments. The distribution of health had direct and substantive effects on the level of death and misery in French departments during the late Third Republic.

Department Level Medical Assistance

To establish the causal linkage between distributional politics and health spending, I test the impact of political variables on the distribution over time of French government medical assistance to departments. Specifically, I measure the *Assistance Médicale Gratuite* (AMG), funding administered by the French government's bureau of social assistance to support care for the poor at hospitals and clinics. The bureau of social assistance, operating within the ministry of interior and later ministry of health, funded the AMG program with state, department, and commune funds and then administered the program to hospitals and clinics within departments. These hospitals and clinics used the funding to care for poor individuals without the means to pay for treatment themselves. Since the poor would otherwise not receive care, AMG was vital to those receiving it, potentially meaning the difference between life and death from the variety of ailments afflicting France from 1910-1940.

I use AMG as a dependent variable because it was an substantial program that was vulnerable to political pressures. Funding for the poor could be inadequate and was distributed extremely unequally (Weiss 1983, 66-72), suggesting politicization in its distribution. The funding was quite controversial when implemented in 1893, as hospitals knew they would lose their autonomy and would become the subject of political concerns (Smith 2003, 67). Over time, the amount spent on AMG grew and government's share of AMG dwarfed charitable contributions. AMG was, by World War I, the primary source of state health funding in France. What administrators first estimated would only be available to 3-6% of the pop-

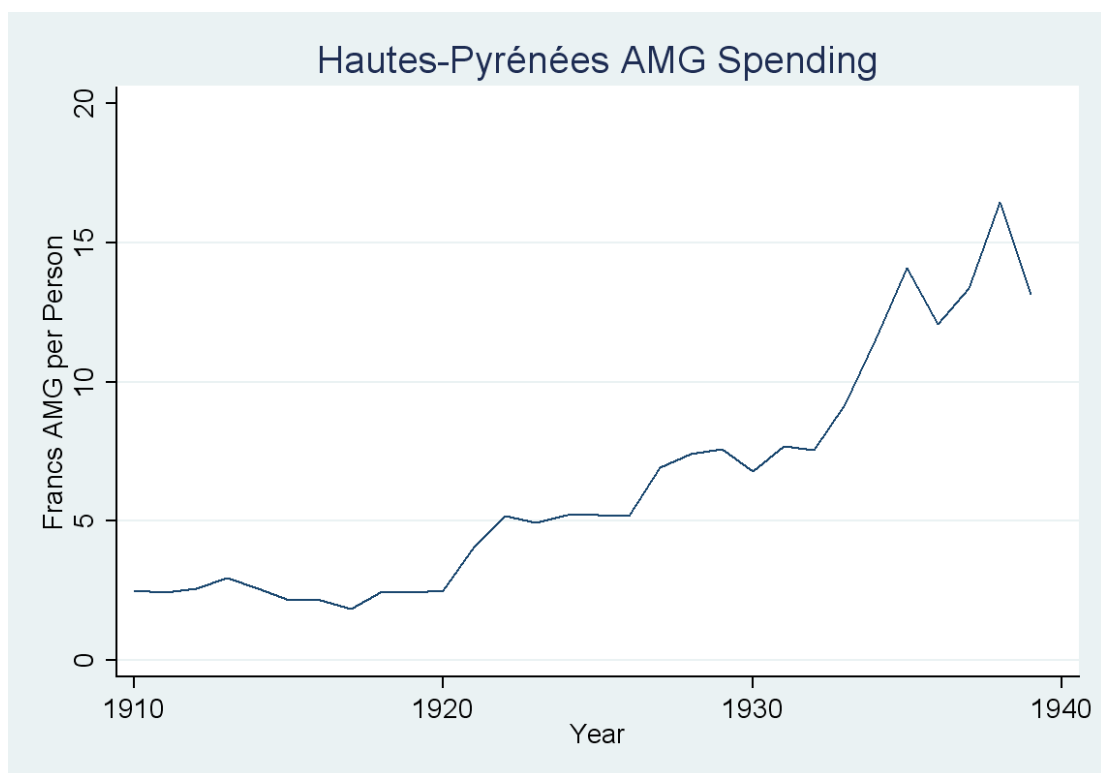
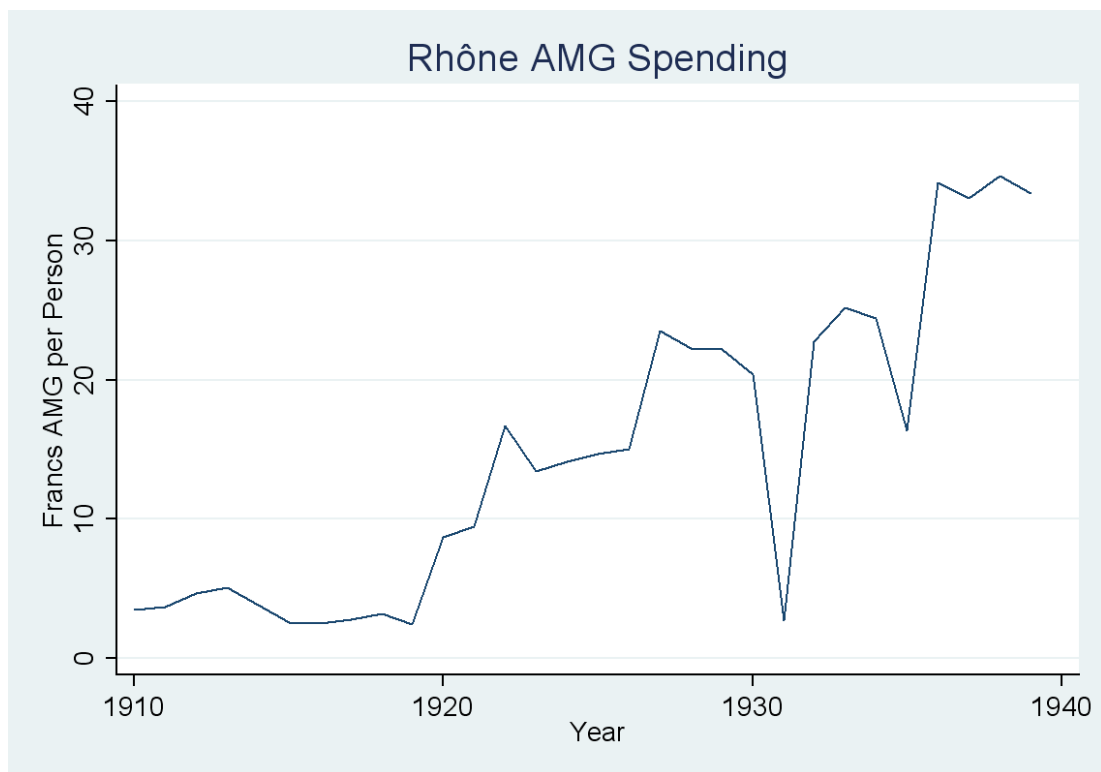
ulation ballooned. The definition of the poor became flexible, as the *nouvelles pauvres*, a new category of working poor, saw their incomes eroded and fell on hard times during the post-WWI period. In response, officials could define even the working poor like shopkeepers, artisans, skilled workers and small pensioners as eligible for AMG (Smith 2003, 127).

I argue that French parties and deputies manipulated this funding in order to protect voters, reward turnout, gain votes and win elections. Politicians could capitalize on the importance of this funding to target some departments over others and deliver better public health by treating the sick poor. This improved public health department wide, as the poor were especially vulnerable to communicable diseases. Improving their health, therefore, indirectly affected and improved the lives of voters not directly treated by AMG. Politically important districts identified by my theory will, all else being equal, receive more AMG.

Data

I gathered data on yearly AMG funding, in francs, from archival French public assistance records from 1910-1940 for every department in France (Statistique Général de la France 1895-1944). This funding includes only money distributed by the government and excludes private and charitable contributions. States, departments and commune administrations raised these funds under the control of the bureau of assistance. It was distributed to departments before being dispersed to communes and then directly to hospitals based on local qualified recipient lists. I gathered AMG figures by department and then generated per capita AMG figures. Larger departments would naturally receive more francs of support because, all else being equal, as they would have more poor to serve. I also adjusted the *Assistance Médicale Gratuite* spending figures to 1930 francs. The final dependent variable for the analysis is 1930 francs per person of AMG per department. In order to give a visual sense of the dependent variable, Figure 3.1 shows two sample department AMG budgets, one from a populous urban department including the city of Lyon, Rhône, and a small, mountainous, rural department, Hautes-Pyrénées.

Figure 3.1: AMG Dependent Variable Distribution



Independent Variables

The theory advanced in Chapter 2 generates a number of testable hypotheses about the sub-national distribution of AMG funding in France. In order to test that theory, I operationalize those hypotheses in the unique context of Third Republic France. After discussing the hypotheses and their operationalization, I present a summary of these independent variables in Table 3.2.

Level of Government Support

First, I test my hypothesis regarding the influence of the core voters on the distribution of health assistance spending. According to this logic, more strongly pro-government districts receive more health resources when their parties are in power. Theoretically, this represents politicians' desire to maximize the probability that the government's AMG dollars will go to a core supporter of the government when distributing health. They want to protect the health of their core constituents in order to improve turnout and prevent new parties from forming and robbing them of support in their strongholds. Coordination motivations were particularly important in France because new parties were a dangerous threat to legislators with weak party identities. Most Third Republic French voters identified with an ever changing group of republican parties. Maintaining a party identity was crucial lest a new, ideologically similar party emerge and usurp a deputy's voters in a subsequent election.

I hypothesize that government parties used their legislative and administrative powers to alter AMG flows and target departments containing more of their voters. As a result, I expect departments voting more heavily for parties in government to receive more funding when their parties are in power. I measure this effect using the percentage of votes received by the incumbent government in the last election in a department.

Close Races

My theory suggests that, while targeting government stronghold districts with many core voters with health resources, governments also attempt to target swing voters in strategically important districts. Governments have incentives to use health resources as a carrot to persuade swing voters to vote for the incumbent government. Specifically, they will attempt to win votes with distribution in those districts where each changed vote has the highest probability of altering election results. This effect is therefore dependent on the electoral system. The French system was primarily a two round SMD system, meaning that the most valuable votes were in those districts with close races that the government either narrowly won or lost. Money spent persuading swing voters in safer districts is less likely to change electoral outcomes and be politically wasted.

To operationalize the impact of close races on government incentives to distribute AMG, I use a proxy for competitive races derived from the French two round system.⁵ In Third Republic France, close races, where no party gains a majority of votes, go to the second round and a runoff SMD election decides the winner. Usually this runoff meant a competition between the top two vote getters from the first round. Once in the second round, surviving parties engaged in the process of convincing voters who voted for eliminated candidates to vote for them. The decisions of these voters involved party bargaining, the ideological closeness of eliminated candidates and the ideological identity of their second round opponent. As a result, parties participating in the second round rightly believed that the election could go either way. Promises of future resources or past distribution could have an effect on the outcome by convincing voters to change their vote and ally with their party in the second

⁵From 1919-1924, there was a period of two legislative elections where the French experimented with a form of department wide list proportional representation with some majoritarian characteristics. In a large magnitude list system, as I argued in the Chapter 2, there are no strategic incentives for governments to target swing voters in specific races. In PR elections all voters within a department count equally toward gaining another seat and countrywide all individual voters are of almost equal strategic value. In the data, I code all elections in this period as having 0% close government races. Recognizing that this may be an imperfect approach to modeling the lack of strategic incentives during this change to a more proportional system, I also performed robustness checks of the AMG model dropping years when the last election was a PR election. Results are substantively similar to models using the data coded with 0% close races.

round.

Therefore, I anticipate that governments considered themselves in marginal close races, where winning swing voters was critical, if there was a second round and if their party was involved in that second round. In terms of measurement, I created a indicator variable noting if there was a second round in the previous election in a district and at least one party of the current government took first or second in the first round. I then aggregated over races in the department and calculated the percentage of races in a department with close races in the last legislative election. I hypothesize that the government gave departments with many close races it was involved in additional AMG funding in order to buy votes from swing voters.

Pivotal Voters

Other strategically important voters are defined by the legislature and the party system. In France, pivotal voters are voters represented by moderate parties in the ideological center of the legislature. In parliament, these parties are vital for the passage of legislation. As a result, their voters are the target of distributional benefits from the government, who needs to buy off the median moderate legislators in parliament to pass policy. As suggested by the qualitative evidence, this effect is common in Third Republic France, where government policies of pushing towards the center rewarded radical parties with health policies for its small business and rural constituencies.

In the French electorate, swing voters of pivotal center parties were much coveted by both right and left because they were needed to ensure electoral victory. Both parties vied to gain their vote and tip an SMD race in their favor. In the context of the French electoral system, this strategic electoral effect is amplified by the unique characteristics of the two round voting system. Victory in the second round of the two round SMD system was often decided by which candidates gained the votes of eliminated centrist candidates. In my data, this usually takes the form of a competitive second round between a moderate republican

candidate standing against an SFIO candidate in the wake of the elimination of a centrist candidate in the first round. In this example, the election hinges on whether the majority of centrist voters will vote for the republican candidate, to the right of their position, or the SFIO candidate, to their left. In order to ensure that the center will split their way, I argue that all French governments will target health benefits toward these voters.

To measure this effect, I calculate the aggregate vote percentage received by radical independent and radical socialist candidates in the first round within a department. Qualitative evidence indicates that radical voters were pivotal in legislative politics in the Third Republic and were incredibly influential in the Chamber of Deputies even when not in government. In addition, in the electorate their voters frequently decided elections between other left and right candidates by their vote allocation decisions after the first round. All parties and governments are therefore incentivized to reward radical voters and districts with particularistic policy. I hypothesize that departments with a higher vote share of radical voters in the last election received higher levels of AMG.

Pro-Health Party Government Control

Health spending is determined not only by the types of voters in the electorate, but also by the policy priorities of the government in power. Governments placing increased emphasis on health and social welfare policies work harder to distribute more health funds nationwide to all constituencies. In late Third Republic France, historical evidence suggests that the socialists and communists paid special attention to health policies in their party platforms and in power. This was a function of both demand from their poor constituents, urban workers, for better health and a platform prioritizing pro-health policies. While all parties in Third Republic France had large constituencies of unhealthy and poor voters, especially in the rural areas, only the socialists and communists created a specific party platform

establishing health as a central theme.⁶ I expect French governments including socialist or communist parties increased AMG health spending in all departments. I measure this with an indicator variable if the SFIO, independent socialist or French Communist Party groups are in government in that year.

Pro-Health Party Electoral Strength

Regardless of which parties are in power, my theory anticipates that the demands of pro-health parties lead to increases in health distribution to their departments. Since health is such a high priority for these parties and their constituents, health is a policy area where they can be cheaply bought off to support government parties or quell potential unrest. In France, the qualitative evidence indicates this behavior occurred frequently: socialist and communist constituencies were mollified by right wing governments using health insurance and increased spending policies. I hypothesize that this behavior extended to increased AMG distributions to departments supporting socialist and communist parties. I predict that the more voters supporting socialist and communist parties in a department in the last legislative election, the more AMG funding they received.

Legislator Power

Theory indicates that it is not just the party identity of legislators but also their personal qualities that determine their ability to gain the upper hand in the health distribution process. Powerful legislators will be able to secure additional health funding for their departments. Senior deputies in French parliament held more institutional power, were more likely to hold leadership positions and were more experienced in the legislative process than new legislators. As a result of these advantages, I anticipate that more senior members brought more medical funding to their home departments in order to ensure reelection. To

⁶In fact, historical evidence shows that in the Third Republic urban areas with many socialist and communist workers had better health outcomes than other, especially rural, areas (Smith 2003, Weiss 1983).

measure the institutional power of legislators, I derive a measure of average seniority for departmental delegations to the Chamber of Deputies. Departments with higher average seniority are collectively able to bring more AMG to their departments because of their political advantages.

Legislator Expertise

Finally, expertise influences the ability of legislators to secure health funding for their departments. Legislators with first hand knowledge of the medical system, either through committees, bureaucratic service or professional expertise, will be both more sensitive to the scope of health problems and better able to navigate the health bureaucracy to their advantage in the distribution process. Such expert legislators bring more medical funding to their departments. In France, the medical field was a common profession in the Chamber of Deputies, much more common than its contemporary British or American counterparts. Ellis's (1990) study of French deputies provides detailed historical evidence showing that medical doctors and health professionals in the French legislature played a disproportionate role in shaping health policy in the Third Republic. They were the authors of many health related bills and the driving force behind reforms like the health assistance act of 1893. "French physicians were in an extremely favorable position in this political system" and "doctors controlled the levers" of health policy in the Chamber of Deputies (Immergut 1992, 82-83). In recognition of French doctor legislators' unique expertise, increased attention to health issues and disproportionate power to control its distribution in the legislative process, I predict that department delegations with higher proportions of medical professionals received more AMG funding.

Controls

In addition to theoretical variables, I also include controls in the quantitative model to account for potential non-political causes of health spending. First, historical shocks may

Table 3.2: Determinants of Increased AMG in French Departments

Hypothesis	Operationalization	Variable Name
Govt Support Level	% Support for Govt	PctGovVote
Govt Close Races	% 2nd Rounds Govt Party Competitive	PctCloseRace
Pivotal Voters	% Support for Radicals	PctRadicalVote
Pro-Health Govt Control	Socialists or Communists in Government	SocComRule
Pro-Health Strength	% Support for Socialists and Communists	PctSocComVote
Legislator Strength	Average Department Legislative Seniority	YrSeniority
Legislator Expertise	% Delegation Health Professionals	PctMedical

play a role in health funding. In France, World War I had a negative impact on all French non-military spending, as World War I consumed French resources and devastated much of its industry and tax base. The state was unable to pay its bills, taking on a huge war debt. Medical funding suffered as a result of this diversion of funds to the military due to increased government spending on the war. During WWI, I anticipate that departments received lower levels of AMG because of this budget constraint.

Country level income has an effect on the ability of governments to distribute AMG. When a larger tax base is at its disposal, the government holds the ability to spend more on country welfare needs. In high income boom years, I expect the French government to bring in higher revenue and, all things being equal, spend more on health nationwide. To account for the effect of national income on spending, I include yearly estimates of aggregate French GDP per capita taken from Maddison (2010). These figures are adjusted to 1990 currency units to account for price levels. I expect that higher French GDP per capita led to more AMG spending by the government across the country.

Finally, I include a measure of urbanization. In France, public health efforts focused on urban areas because of the increased efficiency of spending. Sanitation, hospital funding and immunization are most efficient in cities, where they reach the most potential citizens. Dense departments were more desirable targets for health projects, all else being equal. As a result, they have stronger public health infrastructures than rural areas. In addition, com-

parative evidence suggests that in developing countries rural constituents are marginalized in the political process (Bates 1981), leading to a preference for urban dwellers in health distribution. To measure these effects, I calculate the population per square kilometer in each French department. Population figures were drawn from the last French census report before the observation. I anticipate that high density departmental populations result in more medical assistance funding per person.

Data

Gathering data for all the variables included in the analysis required extensive archival work from primary French sources. In addition, the instability of French parties and cabinets required research and best judgments for a number of the variables. I discuss the specifics of the data and any relevant issues of measurement in depth.

To measure the hypotheses operationalized with electoral strength, I needed to collect electoral data for all available districts in every election during the period.⁷ Collection concentrated on the lower Chamber of Deputies election results, as the French Senate had fewer powers and was infrequently up for reelection. As a whole, data is scarce, as “comparatively, France has the most poorly documented historical electoral statistics” (Caramani 1999, 306). French elections can be quite confusing and are not well digitized, requiring manual entry from primary sources. Caramani (1999) records only a few lower chamber elections between 1910 and World War II, and those are only recorded at the department level with all SMD districts aggregated and seat winners not noted. Before 1910, no scholars have information on disaggregated elections. Pre-1910 French deputies were also not required to belong to a single party, but could instead belong to many or none.⁸ I gathered first round vote totals for all candidates in every race, noting party identity, incumbency, district persons entitled to vote, turnout and whether races went to a second round (Lachapelle

⁷Note that I exclude French colonies from all analyses.

⁸In the future I hope to record previously unavailable electoral data from *Le Temps* newspaper reports in the days after elections, with results running back to the beginning of the French Third Republic in 1870.

& La Chesnais 1910, Lachapelle 1914, Lachapelle 1920, Lachapelle 1924, Lachapelle 1928, Lachapelle 1932, Lachapelle 1936).⁹ All operationalizations using vote totals use first round results rather than second round results. It is more desirable to use first round totals for theoretical reasons. Second round totals tell us little about district partisanship and voter preferences because, in addition to only occurring in some districts, second rounds are intensely strategic. Vote totals are usually the result of calculations made by voters about their second or third preferences along with contextual factors like politician bargaining and the relative ideological position of the opponents and themselves. By contrast, first round results are a reasonably non-strategic, genuine expression of voter preferences across the entire ideological spectrum.

Both dependent variables in the analyses, AMG funding and mortality data, are available only at the department level. As a result, all electoral data are aggregated to the department level. Percentage vote variables are the aggregate vote share parties received summed across all races in the department divided by total turnout in the department. Second rounds occurring with at least one government party in the top two finishers in the first round are similarly aggregated to the departmental level, yielding the percentage of close races involving the government in departments.

Determining which parties were in government is difficult in the Third Republic because of massive cabinet instability. With multiple cabinets sometimes falling in a single year, characterizing the partisan composition of governments required some simplification. Thankfully, this cabinet instability belies relatively normal party coalition stability, as most government changes were merely cabinet reshuffles. I rely on close research of historical sources to best characterize the overall partisan cabinet identity of governments in the Third Republic (Anderson 1977, Bernard & Dubief 1985, Campbell 1958, Wright 1995, Haine 2000). When partisan composition switched, a year is coded with whatever parties spent the majority of

⁹While some skepticism exists about Lachapelle's aggregate election results, the individual constituency results, which I gathered and use in my analyses, are unmanipulated and accurate (Wileman 1994).

the year in power. Of particular note, I consider formally supporting parties, specifically the SFIO and its policy of not officially joining but rather supporting radical cabinets in 1924 and 1932, as being in government. This makes historical sense since left radical cabinets supported by the SFIO functioned in almost all ways as a normal coalition government save for no official SFIO ministers.

Party affiliation in primary sources and elections is also muddled; candidates, especially in the less organized parties on the right, had hundreds of slightly different titles for themselves and their parties. I again rely on historical sources, accounts of subsequent parliamentary groups and best judgments by other scholars to differentiate between candidates (Duverger 1992). In the end, the vast majority of parties were categorized into the party identities discussed earlier: right republican, moderate republican, independent radical, radical socialist, independent socialist, SFIO and communist.¹⁰

To measure seniority and professional background of deputies, I use data gathered by Graham (1983) from French biographical sources. Seniority is calculated in years, generated from the date politicians first entered the chamber for the first time until the year of their final exit. The data are then aggregated by department, averaging the seniority of all deputies sent to the Chamber of Deputies in that department. This resembles the aggregation method used by Golden & Picci (2008) in a study of the Italian parliament. I operationalize expertise using profession codings from Graham (1983), noting legislators working in “medicine, including pharmacy and dentistry” as medical professionals. The aggregated expertise variable is percentage of deputies in a department’s delegation employed in the medical profession.

Modeling *Assistance Médicale Gratuite*

To test the distributional hypotheses displayed in Table 3.2, I perform an OLS regression with department fixed effects on medical assistance spending. Medical assistance is a continuous

¹⁰While no single historian’s account of legislative totals is exactly the same, they are all broadly similar. My totals closely approximate the field’s own slightly differing numbers and are based in the investigation of primary sources.

Table 3.3: Summary Statistics

	Mean	Std Dev
Medical Assistance	7.185	5.874
Mortality Rate	1787.839	778.354
PctGovVote	0.644	0.294
PctCloseRace	0.326	0.327
PctRadicalVote	0.261	0.209
SocComRule	0.258	0.438
PctSocComVote	0.247	0.189
YrSeniority	8.179	3.792
PctMedical	0.099	0.137
French GDP/cap	3812.060	611.918
Hospital Income	25.762	21.304
Pop Density	179.691	989.687

variable that varies over 30 years and across the 87 departments. The general characteristics and distribution of variables in the sample, along with the mortality per 100,000 variable which is modeled later, are shown in Table 3.3. The theoretical variables have significant variance across time as well as geography. Beyond that, OLS is the appropriate tool given that my theory proposes incremental changes in a continuous variable, medical assistance, due to commensurate changes in electoral geography, legislative politics and controls.

I model health spending and mortality using a yearly unit of analysis, forcing me to repeat some observations from previous elections for key electoral independent variables. The repetition potentially raises modeling questions about the appropriate temporal unit. Specifically, repeating observations could artificially deflate standard errors if health funding decision making is set for entire legislative periods. I argue that it is not, and that most of my variables do not reflect this logic: health spending decisions are budgetary decisions made every year making a yearly approach sensible. Yearly units most closely match the unit of analysis to the actual decision making process faced by French policymakers. The electoral variables are also not as static as they appear because incumbent governments drive many of the incentives to distribute and yearly controls like income are certainly not

static. An election period can see multiple governments, considerably altering the electoral variables year over year. As a result, the alternative approach, setting my temporal unit to the electoral period, would omit crucial information. Consider a single electoral period with multiple government coalitions, 1924-1928. The yearly approach suggests that that left government, from 1924-1926, had very different health priorities than right government in 1927 and 1928, while an election temporal unit would overlook this key variation.

In order to account for other variation in departments, I include fixed effects for department in the regression. This controls for unobservable static differences between departments that may affect funding levels as well as other fixed patterns between departments like geography, climate and idiosyncratic political factors. Adding fixed effects for units represents a more conservative test of the theoretical framework. Methodologically, the use of fixed effects make more sense than random intercepts, as the selection process of departments does not resemble random selection and the number of departments is relatively low at 87 (Baltagi 2005). I omit coefficients for unit effects when reporting results as they have no theoretical significant on the distribution of AMG funds.

In addition to the baseline model of health assistance developed here, Model 1, I also performed a variety of similar models with alternate specifications predicting the distribution of health funding. I present two additional models in the text. Model 2 simulates demand for medical assistance with lagged mortality data while Model 3 includes a year trend to account for linear time trends in the model. Finally, I tested additional model specifications as robustness checks as well. The results are robust to lagged dependent variables to account for any time dependence, squared year terms to check for curvilinear patterns in the data and clustering due to year.

As Table 3.4 shows, the results are supportive of all the hypotheses generated from my theory. They indicate that there is evidence that French deputies distributed AMG funds for political ends, based on my operationalizations of the political importance of districts. Each operationalization attains not only conventional statistical significance but substantive

Table 3.4: Predicting *Assistance Médicale Gratuite* Funding

	Model 1	Model 2	Model 3
	Base	Lag Mortality	Year Trend
PctGovVote	1.609* (0.324)	1.638* (0.330)	0.575 (0.309)
PctCloseRace	2.831* (0.338)	2.767* (0.350)	2.179* (0.344)
PctRadicalVote	4.278* (0.486)	4.230* (0.500)	5.084* (0.450)
SocComRule	1.463* (0.194)	1.454* (0.195)	0.332 (0.187)
PctSocComVote	9.235* (0.728)	9.387* (0.744)	2.817* (0.741)
YrSeniority	0.119* (0.025)	0.116* (0.026)	0.064* (0.024)
PctMedical	1.839* (0.689)	1.819* (0.710)	1.847* (0.635)
French GDP/cap	0.002* (0.000)	0.002* (0.000)	-0.000 (0.000)
WWI	-3.935* (0.305)	-3.891* (0.319)	-3.305* (0.283)
Pop Density	0.000 (0.001)	0.000 (0.001)	-0.001 (0.001)
Lagged Mortality		-0.000* (0.000)	
Year Trend			0.343* (0.017)
N	2442	2340	2442

Model estimated using OLS regression. Coefficients presented and, in parentheses, standard errors. Fixed effects coefficients omitted.

* p-value less than .05

significance in predicting the number of francs per person of AMG sent to departments. To illustrate this significance graphically, I include various figures showing AMG predictions generated from the theoretical variables when all other variables are set at the mean. All predictions presented in the text are from the baseline Model 1 and are within the observed sample.

Parties in power used AMG to reward their core supporters' departments, sending francs to departments that contain higher percentages of their voters. Evidence here suggests that, with medical assistance, politicians attempted to secure future votes and prevent new parties by protecting their own voters at the expense of others. This result is substantively significant, as well. Consider the relationship shown in Figure 3.2: changing a department's government support from the non-WWI government mean of 57% one standard deviation to 84% leads to a predicted .43 franc per person increase of medical assistance in a given year. This is an increase in funding of nearly 6% from the average department AMG of 7.19. Electoral support for the ruling party paid off in terms of increased AMG health benefits for the department.

In addition, governments simultaneously targeted competitive races they either barely won or were close to winning in the last election and assisted departments with more radicals in order to maximize their chance of winning seats. Figure 3.3 shows two effects: the impact of increasing the competitiveness of races in a district and the impact of a heavily radical department (55% radical, black line) against a weak radical department (5% radical, grey line). A heavily radical department receives a little more than 2 additional francs of AMG, almost a 30% increase relative to the AMG mean. Meanwhile, a department where the government participating in many close races (65%) receives a predicted 1.84 francs of additional support over a district where the government competed in no close races.

The model bears out the hypotheses regarding pro-health partisanship. Simply having a socialist or communist government in power leads to an expected increase in AMG across the board of almost 1.5 francs. It appears that when in power, governments including socialist or

Figure 3.2: Predicted Effects of Government Vote Percentage on AMG

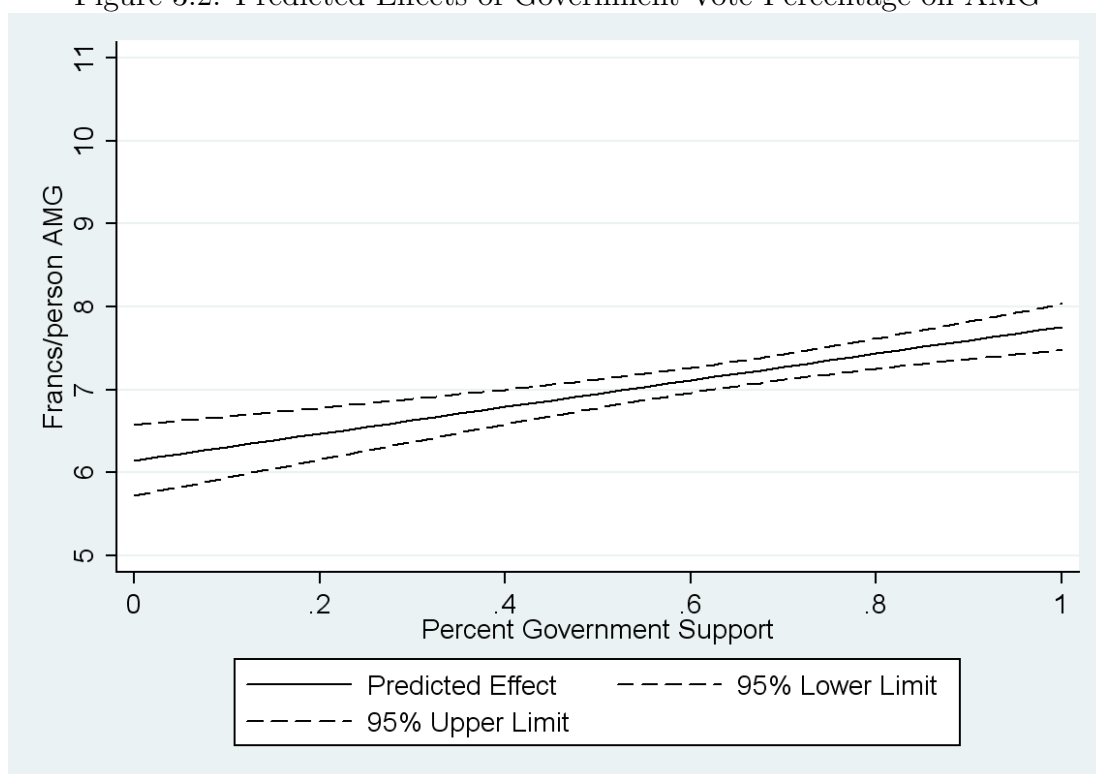


Figure 3.3: Predicted Effects of Competitiveness on AMG

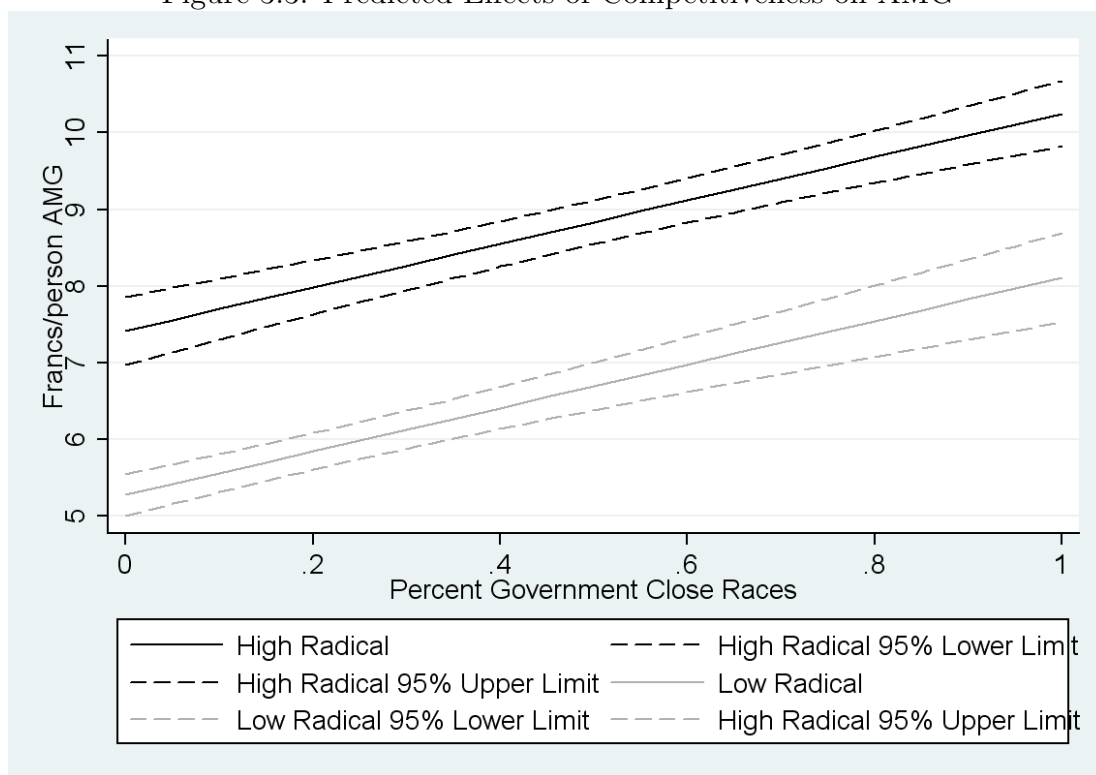
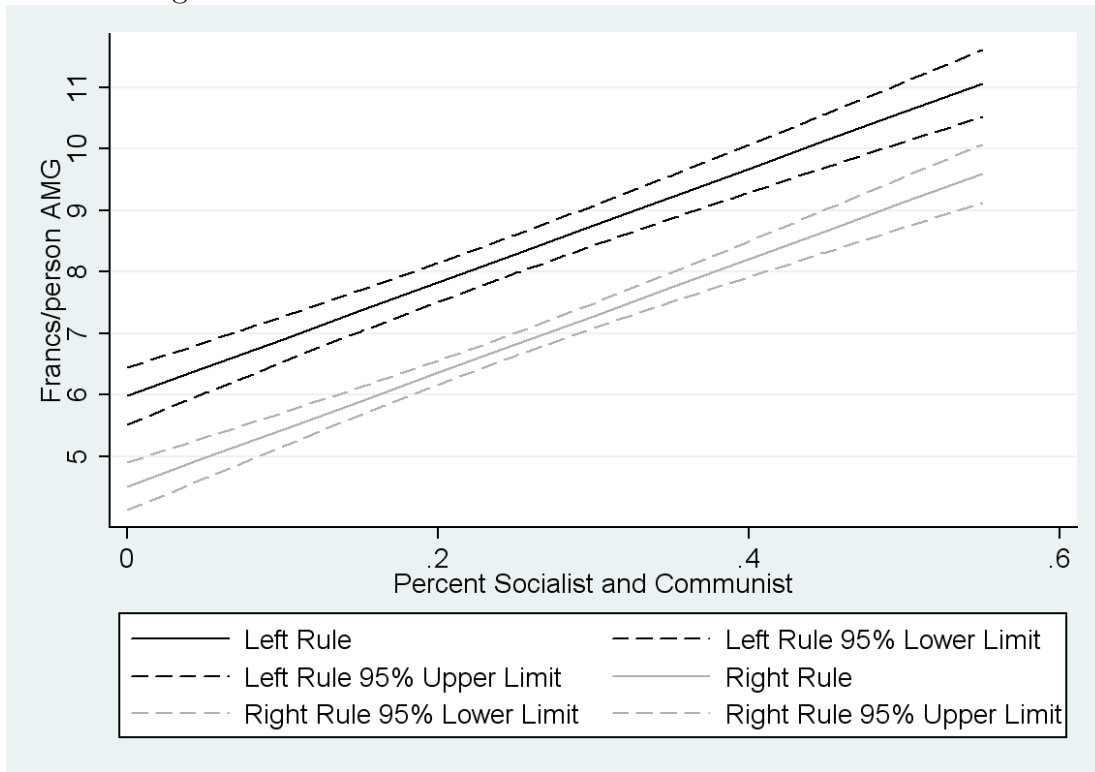


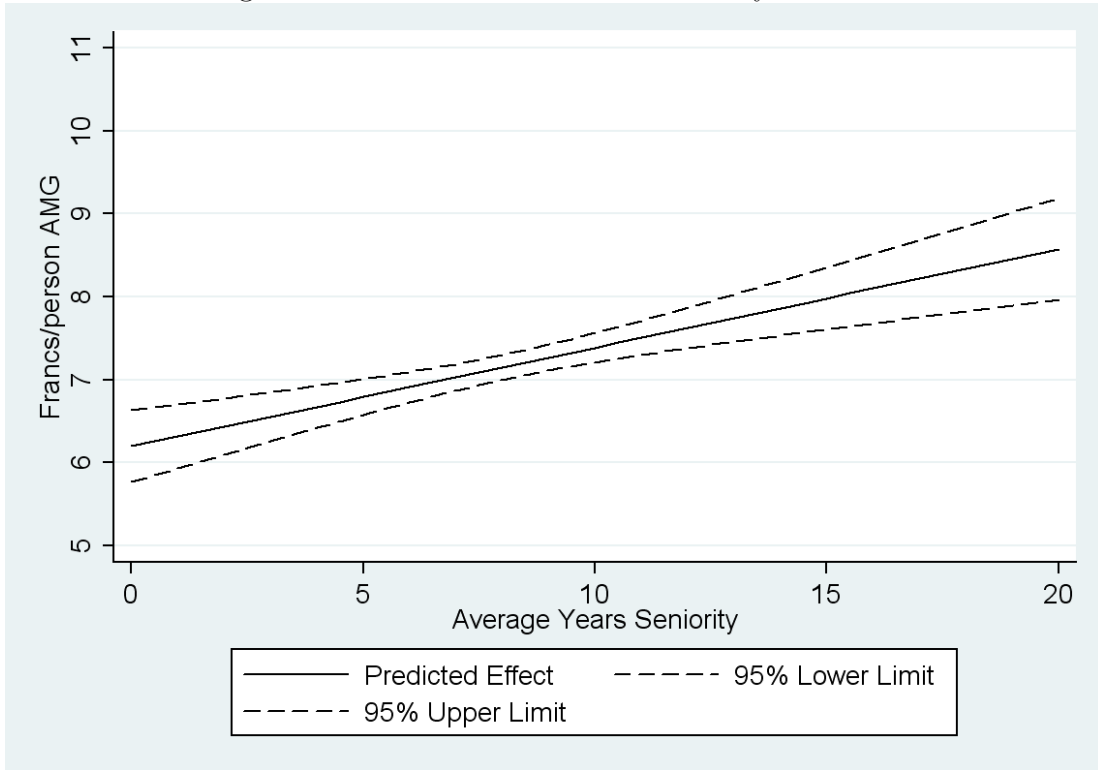
Figure 3.4: Predicted Effects of Pro-Health Parties on AMG



communist parties were particularly keen to support French departmental health with AMG. The tests also show, regardless of parties in power, governments had a propensity to buy off heavily left districts with health. Socialist and communist dominated departments received larger distributions of medical assistance. A socialist and communist stronghold, such as the Seine department that included most of Paris, with 50% of its voters supporting left parties, could expect to receive almost 1.8 additional francs per person in AMG spending than the mean department, or 25% more AMG. Figure 3.4 shows the effects of percent support for socialist or communist parties along with the size of the effect of government control by the left (black line) and by other parties (grey line).

Finally, both leadership variables are also associated with higher levels of AMG. Figure 3.5 displays the drastic difference between powerful, experienced Chamber of Deputies delegations and delegations with little experience. A delegation with an average of 12 years

Figure 3.5: Predicted Effects of Seniority on AMG



experience receives almost 1 franc more per person in AMG than one with an average of 4 years of experience. Medical professionals, too, improve the ability of a department to bring home AMG, though less powerfully than delegation seniority. The model predicts a department with no doctors in its delegation will bring home about .5 francs less to its department than one made up of 25% doctors, which generally represents about two out of eight deputies in the typically sized department.

An alternate explanation for health spending is demand. I evaluate the effect of a high demand for health relative to political factors in Third Republic France in Model 2. This specification included a lagged mortality variable in the analysis to roughly simulate demand for AMG. A non-political model of citizen need dictates that the previous year's mortality rate will determine the next year's AMG spending. If demand drove AMG spending, higher mortality districts would receive more AMG because health spending would flow from the

government to areas with greater mortality. When I included a lagged mortality variable using deaths from all causes per 100,000, I find that this does not appear to be the case. Political variables still perform as expected when accounting for demand to predict government health spending. With respect to the demand variable, the opposite relationship between need and spending appears: poor health departments with high previous year mortality predict lower AMG disbursements. This indicates that AMG is not only distributed without respect to need, but is in fact distributed in a way that specifically rewards healthy departments and neglects unhealthy departments. Politics may be a better explanation of how AMG is spent than demand, and this model suggests considerable other non-political inequities in the distribution of AMG funds.

Model 3 includes a linear year trend to control for over time changes in AMG. While this variable represents an atheoretical control for the linear effect of time, it may also roughly represent the rise of the French welfare state and the changing social relationship between government and citizens in this period. A well developed literature on the rise of the welfare state discusses the new social pact between early modern developed democracies and their citizens (Baldwin 1990, Iverson 2005). Citizens began to expect governments to provide for social and economic outcomes in addition to property rights and the basics of governance. In Model 3, a linear year variable predicts a statistically significant increase in AMG over time, perhaps as citizens begin to expect governments to spend more on health policy. Even after proxying for social pressure over time for health funding and absorbing variation from upward trending out of the data, the importance of political conditions in determining AMG spending remains.

Overall, there is compelling empirical evidence that legislators distribute health in accordance with the distributive framework outlined in Chapter 2 and described in the qualitative research. These results, on their own, are indicative of government distribution of health funding to politically salient departments. They do not, however, provide evidence of altered citizen health outcomes because of that spending. The substantive implications of the

theoretical model may be less interesting if health outcomes do not improve because of the extra support given to them by politicians.

Predicting Department Mortality Rates

The AMG results establish that politicians manipulated medical aid to French departments, but did this medical aid result in appreciable differences in department health outcomes? In order to determine if politicians affected health outcomes with their distributive behavior, I model French department mortality rates. I anticipate that when politicians distribute AMG to departments in order to win support, those increases lead to fewer deaths in departments. In essence, I seek to establish if citizens in France lived and died because distributive political incentives affected levels of medical assistance.

Data on French Mortality Rates

To address the question, I assembled an extensive subnational dataset on French mortality patterns. I hypothesize that mortality rates are a rough measure of overall quality of health in departments. Successful health policy reduces mortality rates, in addition to reducing misery from poor health more generally. I gather mortality counts by department for a variety of causes from French annual statistics and causes of death records for the relevant years (Statistique Général de la France 1840-1940*a*, Statistique Général de la France 1910-1940*b*). I then adjust mortality counts into mortality rates per 100,000, by department. For the purposes of this paper, I model mortality rate per person from all causes. Deaths from all causes best reflects broad based health outcomes in departments.¹¹ Figure 3.6 again shows the distribution of the dependent in the two sample departments, Rhône and Hautes-

¹¹By contrast, in future work, I plan to break down these mortality rates by cause of death rather than using aggregate all causes data. I anticipate that diseases that spread quickly across department borders will not be the subject of distributive behavior, while diseases confined to certain regions and populations due to transmission vector will be prime opportunities for politicians to distribute health. Politically motivated distributive behavior is foolish in the face of pandemic diseases that will spread at will to one's own constituencies unless stopped.

Pyrénées. I expect increased AMG funding to cause reduced mortality rates in departments.

Modeling Mortality and Health Spending

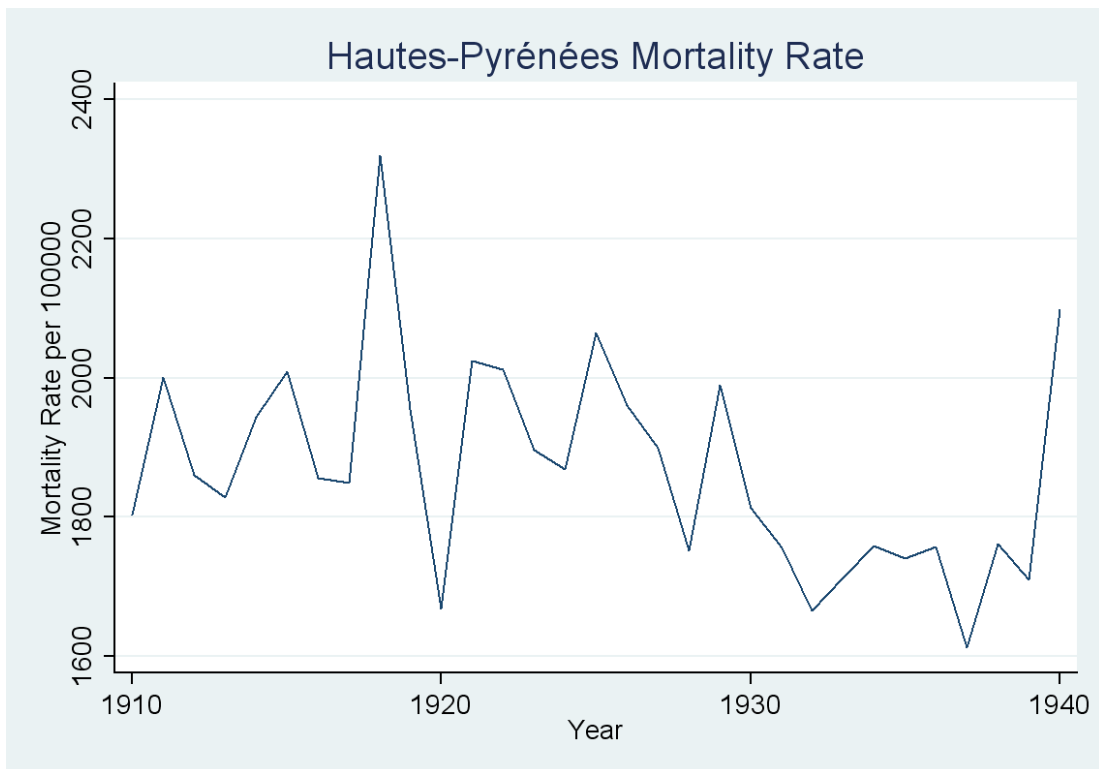
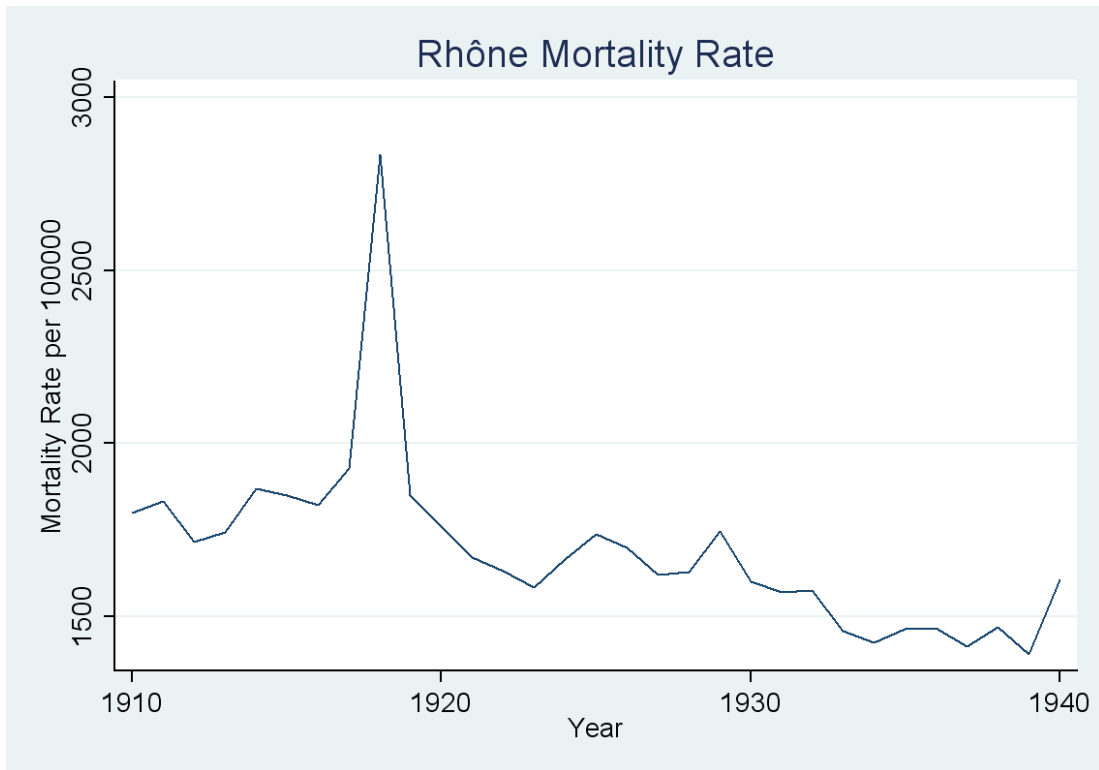
Modeling health spending and mortality rates simultaneously requires a more sophisticated methodological approach than directly predicting health spending. Specifically, modeling mortality rates from health spending requires an approach that accounts for potential endogeneity between health spending and mortality. High mortality rate departments may receive, through reverse causation, higher health funding and vice versa. Regression estimators produce inconsistent and biased covariate estimates when the dependent variable causes independent variables (Gelman & Hill 2007, 215-226). Hausman comparison tests (p-value = 0.014) between OLS and models accounting for endogeneity indicate that OLS results, directly predicting mortality with AMG spending, are inconsistent due to endogeneity. To overcome this problem, I utilize a two stage least squares regression estimator.

In order to account for the endogeneity of spending and mortality and I first choose instruments for the endogenous variable, medical assistance to the poor. Instrumental variables must effectively predict health spending but be otherwise causally unrelated to mortality rates, meeting the exclusion restriction (Gelman & Hill 2007, 220). I argue that the independent political variables from Table 3.4 fulfill these criteria. Health funding levels were the most convenient and flexible tool available to French legislators to bolster public health in particular departments. I contend that legislators manipulated individual department mortality using AMG funding to hospitals and clinics for the poor.

Meeting the Exclusion Restriction

While I do not anticipate that the political variables have any compelling theoretical links to mortality rates outside of health spending, a few of the variables have feasible connections to mortality rates. As a result, I perform robustness checks with the model omitting some variables potentially related to mortality outcomes, particularly percent vote received

Figure 3.6: Mortality Dependent Variable Distribution



by socialists and communists in a department and the percent of medical legislators. Both of these variables could be related to mortality through other means—pro-health parties (socialists and communists) could receive more support in departments and times with exceptionally poor health. Given that socialists and communists usually represented urban workers, who tended to be healthier than rural interests, this seems unlikely but plausible. Similarly, doctors may be more likely to be elected during periods with higher mortality as voters turn to medical legislators in a crisis. Historical data suggests that partisanship and economic conditions were a more important determinant of electoral success during the Third Republic for new deputies, making this again unlikely but plausible. In the interest of being conservative with my empirical testing and meeting the exclusion criteria, I removed these variables from my analysis in alternate specifications to check for robustness. The substantive interpretations of the effect of AMG on mortality outcomes remained identical.

There is no definitive statistical test of the instrumental variables assumptions, but the two stage least squares mortality model passes common diagnostic checks, exhibiting no signs of either overidentification or weak identification. Sargan’s test does not reject the null hypothesis ($p\text{-value} = 0.7807$), indicating that the instruments are valid and uncorrelated with the error term. This provides additional evidence that my instruments collectively meet the exclusion restriction. I also perform statistical checks to ensure that my political instruments for AMG are not under identified or weak instruments. The model rejects the null on both counts, suggesting that the instruments are strong estimators of AMG spending and that the model does not suffer from any severe losses of efficiency due to the instrumental variables.

New Controls and Alternate Specifications

In addition to the political variables used in the instrument of AMG, mortality is the consequence of a number of factors and therefore demands control variables. I use some of the same control variables included in the previous analysis predicting medical assistance when

predicting mortality. These variables include World War I, GDP per capita and population density. World War I was a time of sharply reduced well-being and systemic breakdowns in health systems in Europe. Increased infectious disease, such as Spanish influenza, spread from the war front and contributed to a much higher mortality rate. Meanwhile, GDP per capita measures the effect of aggregate income on mortality. Periods in France where income was lower correspond to a reduced ability for French citizens to pay for private care and maintain nutritional standards. This may result in higher mortality rates. Finally, population density is another determinant of aggregate mortality rates. In France, historical evidence suggests that rural citizens were more susceptible to communicable disease and poor sanitation than urban citizens. Hospitals and charitable networks were much more effective and active in urban areas, leading to lower urban mortality.

A crucial new control in the mortality model is department hospital budgets. Department hospital revenue accounts for private health spending by individuals. Mortality is a consequence of private health spending as well as public health spending. Private spending potentially accounts for two competing effects. On one hand, higher health spending indicates higher income in departments and may lead to lower mortality. It controls for improved health due to departmental income level, with richer departments spending more at hospitals. On the other hand, there is also a selection effect. I expect citizens to pay more fees, spend more on health care and visit hospitals more frequently where mortality rates are high. Annual aggregate department-wide hospital budgets were gathered yearly from French annual public assistance records (*Statistique Général de la France 1895-1944*). They were then normalized to francs per capita and adjusted to 1930 francs to arrive at a final hospital revenue per person value.

The contagious nature of disease and mortality raises another issue specific to the mortality model, spatial dependence. If a single disease drove mortality, it could be important to account for contiguity and spatial contagion. Recall, however, that the dependent variable used in this analysis is yearly deaths from all causes. Mortality by cause records indicate that

deaths in France, save perhaps for 1919 and Spanish influenza, are the result of a wide variety of different causes, due to a multitude of contagious diseases, accidents and non-contagious causes like cancer. No single contagious disease dominates, meaning that spatial contagion effects are highly unlikely to alter aggregate patterns of mortality. In addition, departments are a relatively large geographic unit and the year is a long temporal unit to observe distinct spatial contagion effects. As a result, I do not include controls for geographic relationships or contiguity of departments.¹²

As in the AMG model, alternate tests included a variety of specifications predicting mortality in order to ensure robustness in the results. Specifically, I tested specifications with a lagged dependent variable term to account for possible temporal dependence in mortality, year linear trend and year squared specifications. Results from these analysis are substantively similar to the baseline model presented here.

Predicting Mortality

The predicted effects of politics on AMG and mortality persist. I again used fixed effects for departments in the analysis, absorbing variation caused by static variation between geographic units. The first stage regression in Table 3.5 indicates very similar statistical and substantive effects of politics on the distribution of AMG funds.

The core result of AMG's effect on mortality is compelling. Table 3.5 indicates that politicians affected funding, but they also, in turn, influenced mortality in their districts. Instrumented medical assistance has a substantial negative impact on mortality rates within French departments. For every additional franc of assistance given to departments, instrumenting for health spending, 37 less individuals per 100,000 die. This is a large effect given that average mortality in a French department is 1,787 per 100,000. In a large department

¹²Nevertheless, modeling spatial relationships is a worthwhile robustness check. Accounting for spatial dependence will be especially critical, however, when extending this model to specific disease mortality and morbidity in the proposed future work. Contagion could be quite influential in predicting patterns of a single cause of death.

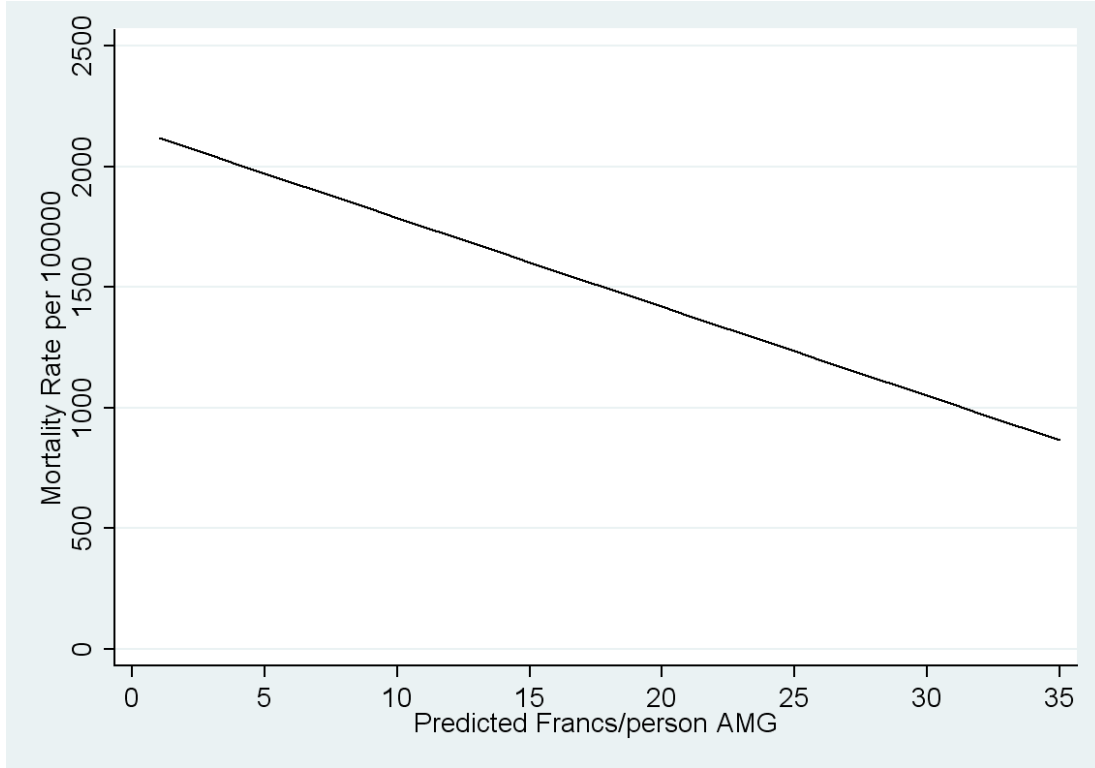
Table 3.5: Predicting Mortality Using *Assistance Médicale Gratuite*

	1st Stage Med. Assist	2nd Stage Mortality
AMG per capita		-36.851* (12.223)
PctGovVote	0.908* (0.289)	
PctCloseRace	1.683* (0.304)	
PctRadicalVote	2.529* (0.438)	
SocComRule	1.000* (0.173)	
PctSocComVote	6.449* (0.656)	
YrSeniority	0.076* (0.023)	
PctMedical	1.515* (0.611)	
French GDP/cap	0.002* (0.000)	-0.053 (0.044)
PrivateSpend	0.166* (0.007)	8.535* (2.886)
WWI	-2.778* (0.276)	31.190* (52.301)
Pop Density	0.000 (0.001)	-0.702* (0.228)
N	2433	

Model estimated using 2 stage least squares regression. Coefficients presented and, in parentheses, standard errors. Fixed effects coefficients omitted.

* p-value less than .05

Figure 3.7: Predicted Effects of AMG Francs per Person on Mortality Rate



like Nord in 1926, a franc per person less would translate to a predicted 726 more deaths. Figure 3.7 illustrates the magnitude of this effect in more depth. In it, World War I is assumed to be over and all other variables are set at their mean. The effect of AMG is allowed to vary throughout its range, from 0 to 35. It shows a difference of a little more than 1,000 deaths per 100,000 between the extremes of 0 and 35 francs per person distributed to a department.

To further conceptualize the importance of politics in determining mortality, consider the predicted effects of political characteristics on the mortality rate of a department through AMG. A department supporting government parties only weakly, 30%, is predicted to receive half a franc of AMG per person fewer when compared to a government stronghold receiving 84% government support. That corresponds to a difference in mortality of 18 per 100,000 people, or a full 1% increase from the mean mortality rate. Similarly, close electoral races

involving the government spur lower mortality, with a highly competitive department (75% of races) experiencing 2.6% fewer deaths than a uncompetitive department (0% of races). Other results, especially when considered together, are larger. Compare two hypothetical departments, one supporting socialists and communists heavily (50%) with their party in power while another supports center and right parties during a period with no left government. The left ruled, left stronghold department receives approximately 3.5 more francs per person in AMG and has a mortality rate of almost 130 deaths per 100,000 lower. This is an 7% difference in mortality rate for the average department. The tests show the substantive outcome of neglecting the health of French departments with AMG.

In short, my models suggest that French politicians shaped the distribution of AMG, responding to the political incentives outlined in my theory. I also present evidence that politicians altered mortality rates through AMG spending. Clearly, health distribution has profound consequences, determining the rate that populations die in departments. Taking this logic even further, politicians may indirectly shape the national electorate over time with health funding decisions. Poor health does damage not only to election chances in the current year, but also in future years. The grim truth is that dead voters do not vote and sick voters and their relatives often cannot make it to the polls (Matlosa, Strand & Strode 2004). From the voter's perspective, being in a politically important department in France helped to ensure one's own survival.

Chapter 4

The United States 1900-1950

Early 20th century United States provides another test for the distributive theory of health. The US confronted the same threatening health situation faced by Third Republic France and modern developing countries, with rampant disease and high mortality rates. In contrast to France, however, the United States started the century with a much lower state public health capacity.

Patterns of US politics ensured that federal solutions to poor public health were targeted in nature. Politicians and parties used appropriations for their political benefit instead of building national institutions bound to serve the country more equitably. US politicians created an environment ripe for Congressional distribution of particularistic health policy. Historians indicate that Congress favored decentralized health arrangements and they showed little interest in more general, bureaucratically distributed funding (Fee 1994). Motivated by their ability to distribute health, Congress blocked early Progressive Party attempts to create a comprehensive central health ministry. Later, Republicans and southern Democrats prevented any substantive expansions of health insurance in the New Deal and continually blocked systematic health reform. While politicians expanded federal health institutions like the Public Health Service, National Institutes of Health and Centers for Disease Control, they did so only in a limited fashion. National politicians made sure that federal responsibilities for health were widely distributed amongst many agencies, giving them narrow goals. Federal legislators then relied on appropriations to underwrite specific health efforts for individual diseases or alternatively bolstered individual state health board budgets directly with federal funds.

I examine the health distribution in the early 20th century US, lending support to the framework advanced in Chapter 2. I first describe the qualitative evidence of federal opposition to central, bureaucratic health assistance measures and the resulting particularistic politics of health in the United States. Then I present a quantitative model testing the impact of House of Representatives' political incentives on health outcomes. I argue that politicians did not use one single institution or type of funding to improve health in the United States but instead used a cornucopia of different federal institutions, project grants and direct appropriations to state governments. Consequently, I infer the presence of federal grants and spending and directly predict patterns of mortality due to House member political incentives to distribute health.

4.1 Politics and the Expansion of Federal Health Policy in the United States

The late development of health institutions in the US occurred first because of economic and political conditions. The industrial revolution and accompanying urbanization in the US happened late in the 19th century, more than fifty years after its start in the UK and well behind continental Europe. The corresponding demand for city, state and federal public health institutions was not strong until the 1880s and 90s. The turn of the century US featured a nascent, decentralized health system with no tradition of central power over health.

Responsibility for health fell on states and localities, usually taking the form of state health boards. Their efforts were woefully inadequate and the boards themselves were “largely powerless and ineffective” (Porter 1999). Disease was widespread; hookworm, for example, afflicted 40% of southerners while their state health boards, where they did exist, were “impotent” and completely starved of funding (Ettling 1981, 119). In general, state and local health boards could not meet the growing public health needs of their citizens.

As a result, demand for federal solutions grew. By the 1880s outbreaks of yellow fever, endemic malaria and water borne disease forced health authorities to rely on a federal institution, the Marine Hospital Service, to monitor national disease conditions (Mustard 1945). Meanwhile, serious losses among military forces in the Spanish American War in 1898 to disease and at the Panama canal raised awareness among federal authorities of the insufficient public health control measures at home (Porter 1999, 157). By the turn of the century, successive bills passed by Congress expanded the Marine Hospital Services' responsibilities to meet some of the nation's public health needs, giving it powers over epidemic disease, quarantine and allowing its Hygienic Laboratory, later to become the National Institutes of Health, significant disease research responsibilities.

At the turn of the century, expansion of federal spending on health had another champion, however. The Progressive movement, born in the 1890s, tried to dictate changes in pre-WWI United States domestic policy. Progressive Republicans attempted to overcome their conservative counterparts in Congress, seeking to create strong centralized federal institutions and end particularistic policy they considered wasteful and corrupt. In health, this meant a strong push for centralized federal public health institutions from 1906-1912. The Progressives stood broadly in favor of protecting against the dangers of sickness and old age through social insurance and increased federal health responsibilities (Porter 1999). The House Committee on Interstate and Foreign Commerce held lengthy hearings and Progressive supporters created a series of bills endorsing a cabinet level department of health (Harden 1986, 36). The newly empowered Marine Hospital Service was seen as a stopgap measure and the other existing health related institutions were spread through an unwieldy variety of different federal bureaucracies. In the end, the Progressive effort ended in failure when southern representatives blocked the matter after a widespread letter writing campaign from Progressive opponents (Waserman 1975, Harden 1986). Instead, a compromise bill was passed. It rechristened the Marine Hospital Service the Public Health Service, whose powers expanded to include non-communicable diseases and additional abilities and resources

to perform field investigations. The Progressives did not gain the centralization of health powers in a single entity that they wanted, however, nor a single coherent vision for health in the United States. The Public Health Service instead became the central federal health institution in the United States. It “aid[ed] the development of state health departments by giving grants-in-aid, loaning expert personnel and consultation on specific problems,” but rather than directly spending funds or using its own discretion to begin programs it remained at the mercy of Congressional appropriations (Fee 1994, 246).

In general, US federal government spending during the early 1900s operated largely on patronage and particularistic policy rather than bureaucratic discretion. American political parties were not interested in new social policies or attracting classes of voters, but rather with distributing funding through established channels to select groups (Orloff 1988). Likewise, non-Progressive groups were uninterested in changing this status quo with respect to health policy. A cross-party coalition supported only fragmented and easily influenced health institutions, despite multiple changes in government between parties in the House and Senate from 1900 to the 1920s. Conservative Republicans representing employers, doctors and insurance preferred piecemeal and private solutions to US health funding (Hoffman 2001, 182). They were joined in opposition of federal health spending by southern Democrats opposed to any federal institutions breaking up the system of patronage that kept them in power. Southern Democrats prevented federal programmatic interference in their health and social patronage by using their ability to control the House committee system, through Congressional agenda control (Alston & Ferrie 1999, 39-41). Congress preferred distributing health policy on an ad-hoc basis to meet their political needs rather than the deeply entrenched and independent bureaucracy advocated by the Progressives.

It was this desire to maintain pork barrel control over social policy rather than inherent liberalism that prevented the rise of central welfare institutions in the United States. Major social programs were not foreign to the federal government at the turn of the century. In particular, the Civil War Pension system represented an almost de facto federal pension ser-

vice for northern Americans, with over half of white men in the north receiving substantial pensions, along with many widows. Expenditures accounted for a staggering 1/5 to 1/3 of the US federal budget (Orloff & Skocpol 1984, 728). What made such a system politically acceptable was its inherently political and particularistic nature. Northern politicians distributed its gains during elections to individuals with claims of Civil War disabilities conjured well after the fact. Despite the efforts of Progressive and later Democratic politicians, any attempts to increase federal health services in the first half of the 20th century took on a similar distributable form.

Health monies spent through the Public Health Service were various types of political targetable projects. It spent the pre-New Deal years pursuing specific diseases and projects mandated by Congress rather than broader public health goals.¹ This usually meant forms of grants-in-aid to states for particular problems. In the 1910s and 1920s Congress appropriated money for a variety of specific tasks: grants for rural sanitation, malarial control, pellagra investigations, trachoma control efforts, plague control and an expensive program to control venereal disease (Williams 1951, 259-410). This grant based, disease specific approach to health funding dominated because it “proved politically popular; Members of Congress were willing to vote funds for specific diseases or for particular groups... but they showed less interest in general public health or administrative expenditures” (Fee 1994, 247).

By the end of World War I, the Progressive movement, which had so much pre-war momentum (Teddy Roosevelt’s Bull Moose party even came in second during the 1912 presidential election), was out of steam and thoroughly discredited. Its Republican opponents frightened voters with a campaign linking their centralization policies to a Red Scare. They implied that Progressive health and social welfare spending and programs were tantamount to Russian revolution or German treason (Oberlander 2003, 20). In the postwar 1920s a booming economy, Republican Congress and Republican presidents in power meant that

¹The main task it undertook with broad national benefit was in-depth information gathering duties. To get a full sense of the Public Health Service’s day to day activities, *Public Health Reports*, published weekly, provide full documentation.

large scale programmatic social programs continued to be a non-starter. Conservative Republicans supported an “anti-bureaucratic state” and welfare capitalism, the provision of health and social spending by the private sector (Porter 1999, 223). Curiously, in 1921, in a political environment of declining Progressive strength the Progressives passed their only substantial federal success in health spending: the Shepard-Towner Act. It gave large-scale federal support to maternal and child health, coordinated by the federal Children’s Bureau. The distributive implications of the bill give insight into its success where other Progressive attempts at increasing health funding failed to pass through Congress. This bill specifically targeted women, recently enfranchised in 1920. “A principal force moving Congress was fear of being punished at the polls. The women’s vote was an unknown quantity at the time. For years, the suffragists had promised to clean house when they got the vote” and “Congressmen reported that they were told that if they voted against the measure every woman in their district would vote against them in the next election” (Lemons 1969, 779). My theory indicates that important swing voters will receive extra health funding to secure elections. Since women were considered a new swing voter group by legislators, much sought after, politicians in the 1920s tried to buy their vote through health distribution. The Shepard-Towner Act passed with bipartisan support through the highly conservative Republican Congress, normally loathe to initiate any programmatic health spending. Support was re-upped in 1926. Despite ideological objections, Congress acted to distribute health funding and improve health outcomes for women in order to win their vote in future elections. By the late 1920s, however, it became clear to legislators that women were not swing voters and did not vote differently than other groups. The Shepard-Towner health funding ceased in 1929.

Specific, targeted, health resource appropriations continued throughout the 1920s but it was not until the Great Depression and a crushing Democratic House, Senate and presidential victory in 1932 that politicians considered new federal health program expansions. Popular support for FDR and the new Democratic Congress provided “an opening for the Roosevelt

Administration or congressional Democrats to initiate new public social programs” (Orloff 1988, 66). Substantial specific expenditures on social programs followed, many of which directly improved health for poor Democratic constituents, such as a variety of infrastructure improvements by the Civilian Conservation Corps or Works Progress Administration digging “thousands of miles of ditches” to control malaria (Etheridge 1992, 3).

The New Deal monumentally expanded federal health funding in the Social Security Act in 1935 but political resistance in Congress again prevented any coherent, centralized approach to distributing health funds. Many liberal Democrats, for example, supported the inclusion of health insurance in New Deal legislation and the Social Security Act. National health insurance benefited its northern labor and working liberal middle class core voters. The Committee on Economic Security (CES), the cabinet level committee established to draft the Social Security Act, was torn on the issue of health insurance but ultimately did not include it in the bill sent to Congress. The CES initially indicated its strong support for national insurance, calling it equally as important as unemployment and old age insurance (Gordon 2003, 16). It was instead replaced by another patchwork system of health and health related grants for various specific groups, in particular Titles V and VI of the Social Security Act. Congressional resistance and intense pressure from doctors and the American Medical Association caused this alteration. The Ways and Means Committee of the House, for example, explicitly indicated that its support for the Social Security Act’s increased health funding in no way represented support for health insurance (Funigiello 2005, 20). Southern Democrats, as well, resisted significant expansions of social protection in the Social Security Act (Alston & Ferrie 1999, Gordon 2003, 49-74). FDR and liberal Democrats, meanwhile, wanted to revisit health insurance later, hoping to secure health funding for their core constituencies. In the end, Congress considered the question multiple times throughout the 1930s and 1940s, in the form of the Murray-Wagner-Dingell bill, but did not pass it. Substantial Democratic setbacks in the elections of 1938 and the strengthened coalition between conservative Republicans and southern Democrats in opposition to federal health

programs, however, prevented any more progress from being made in federal health insurance or even a more modest systematizing of federal health funding in the United States (Patterson 1967, Funigiello 2005).

Nevertheless, the Social Security Act increased the amount of money distributed to states and localities for health substantially. Title V provided millions of dollars for mother and child health to states. Title VI appropriated unprecedented amounts of federal resources for health, in 1940 reaching 9.5 million and increasing sharply thereafter (Shonick 1995, 93). It distributed money according to size, economic status and special problems directly to states. Indicative of the distributive characteristics of US health politics, over time special conditions became most important in the distribution of federal public health money by the bureaucracy (Shonick 1995). In aggregate, after the Social Security act, federal funding played the dominant role in American public health, as a great deal of federal money required state matching funds. By 1941, federal funding accounted for 1/3 of overall health related spending in the country (Mountin & Flook 1943). It remained, however, in the hands of a bewildering array of federal agencies: the Department of Labor, Children's Bureau, the Army Corps of Engineers, the Public Health Service, the Department of the Interior to name only a few (Fee 1994). These health services were "loosely organized, artificially separated and overlapping in performance" (Mustard 1945, 186).

New federal institutions generally had a specific health goal. Congress authorized the creation of the Centers for Disease Control (CDC) in Atlanta, for example, in 1946 as an extension of malaria control efforts in the South. As a result, malaria was the focus of the CDC's early operations and funding, when its huge coordinated campaign brought malaria under control in the South (Etheridge 1992). Congress also gave the CDC a mandate to control other communicable diseases, but the CDC could only fulfill that mandate if appropriated enough funds by Congress. In practice, CDC funding was political. The CDC jockeyed for more appropriations, using connections with Democratic Appropriations Committee members of the House and Senate to secure additional funds (Etheridge 1992,

60), illustrating the importance of powerful legislators on key committees in the health distribution process.

Similarly, the aftermath of the New Deal saw ad hoc increases in health funding, appropriated by Congress to deal with specific health projects. Congress gave specific health grants for venereal disease (1938), tuberculosis (1944), mental health (1947), industrial hygiene (1947) and dental health (1947). The Hill-Burton Act of 1946 provided huge appropriations, 75 million dollars per year, directly to hospitals in local areas. Hill-Burton was extremely successful politically—“no health program in the US had ever been so generous or so popular” (Fee 1994, 252). Simultaneously, the same Congress that passed the Hill-Burton Act strangled efforts, again advanced via the Wagner-Murray-Dingell bill, for more equitable and comprehensive care, including medical insurance, led by liberal Democrats and Truman. This time the bill died in the Southern Democrat dominated Ways and Means committees of the Senate and House (Gordon 2003, 20). Subsequent Republican victory in House elections in 1946 ended immediate prospects of passing health insurance but Truman pushed it anyway, “aware that he had no chance of passing the Republican Congress” in order to punish the so-called “do-nothing” Republicans at the polls with health policies that were popular among core Democratic constituents (Oberlander 2003, 21-22). Liberal Democrats again pushed for insurance in 1949 after their shock 1948 electoral victory over the Republicans but were unsuccessful after a massive opposition campaign by the American Medical Association leveraging Cold War anti-communist sentiments (Amenta & Skocpol 1988, Porter 1999).

By 1950, the United States faced a different kind of public health threat, chronic disease (Corwin 1949). The most urgent public health crises of the first half of the century were somewhat under control using patchwork federal institutions supporting state health efforts. Communicable disease no longer dominated the morbidity and mortality tables of the *Public Health Reports*. The United States now contended with heart disease, cancer and accidents as its dominant mortality threats (Fee 1994). These public health threats demanded different public health strategies. While the United States continued to reinforce its own targeted

form of federal public health systems, creating Medicare for older middle and lower class citizens and Medicaid for the poor in 1965, public health conditions in the second half of the twentieth century no longer forced politicians to make the dire geographic choices about communicable public health threats.

Qualitative Conclusions

Federal health spending in the United States was substantial and important in the first fifty years of the 20th century. The federal government generally intervened in state health systems using grants and targeted disease aid to states. The Public Health Service, formed in 1911, was the primary federal public health organization and coordinated public health efforts with states. Federal health resource allocations grew over time as it became clear that health outcomes in states were unsatisfactory for a now industrialized economy. National public health efforts that started in 1900 from virtually nothing became the driving force in government health spending by the 1930s and 40s, dictating state and local health priorities and giving out tens of millions of health dollars.

Federal health resources and support continued to be assigned by distributive politics, however. Congressional appropriations allocated money to target a specific disease or pinpoint particular populations instead of supporting independent bureaucratic health institutions. Congress chose to maintain fragmented federal institutions in order to maximize leverage over health distribution. Congress distributed money to many federal organizations directly related to public health, about 40 in the 1930s (Fee 1994, 246). All had responsibilities in assisting states with health issues. Republican and Democratic Congresses repeatedly defeated efforts to create a central health bureaucratic agency controlling all health spending because it might take distributive power away from legislators. In particular, a coalition of conservative Republicans and southern Democrats in Congress resisted any attempts to rationalize federal spending and reduce the role of distributive politics in health spending from 1900 to 1950. This coalition came under political pressure from the pro-health Progressive

Party and progressive Republicans in early decades and later pro-health New Deal liberal Democrats. They wanted to spend federal money more equitably on health services and centralize federal health provision and institutions.

Finally, despite the miserable failure of welfare capitalism and private insurance in the Great Depression and huge Democratic majorities in support of social change in the 1930s, health insurance ended up as one of the great failures of the New Deal. Congressional opponents made sure that the Social Security Act allowed continued business as usual for public health in the US, distributing money to specific constituencies and states. While Congress allocated hundreds of millions of dollars to specific states to build hospitals and bolster local health in the Hill-Burton Act, they flatly refused to expand any sort of more programmatic mandatory health insurance for constituents. In short, the history of health politics in the early US indicates that legislators preferred to operate using a system that they could manipulate to their own electoral needs and defended that system against all political challengers.

4.2 Modeling United States Mortality Rates

In order to evaluate whether US national politicians systematically engaged in distributive behavior as predicted by my theory, I perform empirical tests predicting mortality using data from the US House of Representatives ². I concentrate on the US House because it is more frequently elected and thus more sensitive to year to year changes in the health of its constituents than the Senate. Since public health conditions can and do change quickly due to epidemics and the rise and fall of particular diseases, House members will be likely to use health as distribution. The key difference between quantitative tests in the US and in France is the fragmented nature of US federal spending on health. Accounting for all federal spending on health or health related particularistic projects in the United States is

²Incorporating a Senate model into this analysis is an important future project.

impossible.

Federal institutions did not keep extensive, centralized data on health spending in various states because a vast array of different agencies allocated health resources via formula, categorical and project grants. The federal structure of the United States allowed national politicians to send resources to address particular health issues or target states but leave other areas alone. States kept their own health statistics on spending and most federal money was channeled through state health budgets to assist them (Shonick 1995, 89). Consequently, even if the money's source was the federal government, it generally showed up on the states' books. In practice, state spending levels are not well documented—records exist for individual states but not with any regularity or in one place.

Tracking this funding would still not account for the indirect positive health effects of other infrastructure and spending bills passed by the House. As a result, instead of modeling this complex and terribly fragmented system, I infer but do not observe federal health spending. Congress worked to reward politically important constituencies using health through a wide variety of organizations and spending decisions. Theoretically, the link between increased public health spending and lower mortality rates is concrete and the qualitative evidence indicates that maintaining the ability to distribute was a motivation in American politicians' political decisions on health issues. Increased health spending works to decrease mortality rates within states. Additionally, the French and Indian cases, where I perform more sophisticated testing, indicates that health spending does in fact predict lower mortality rates. This goes some distance in solidifying the causal story and demonstrating that distributive health spending leads directly to changes in mortality.

Ultimately, I argue that House members worked to reduce mortality from all causes from 1900-1950 in order to gain political benefits. Mortality rates are therefore the dependent variable in the American analysis. I contend that legislators affected the mortality of constituents through the unobserved mechanism of health resource distribution. I predict that politically important constituents saw their mortality rates decreased through legislator

spending efforts while politically unimportant areas experienced higher mortality rates.

Data

I gather US mortality data for the 1900-1950 period for every state in the federal mortality registration program. This required archival data collection as these data are not yet fully digitized at the state level for this period. Vital Statistics of the United States reports, released yearly starting in 1900, yielded the necessary data (US Bureau of the Census 1900-1936, US Bureau of the Census 1937-1960*b*). These reports contain detailed mortality breakdowns at the state level. Unfortunately, sub state mortality rates, at the electoral district level, do not exist. State level mortality data nevertheless enabled me to test the effect of the theory on variables corresponding to state's House delegations rather than individual districts.

The Vital Statistics reports do not contain all states for all years, making this an unbalanced panel with some states omitted in early years. Submitting mortality reports to the federal government was not mandatory until well into the period in question. In 1900, for example, only 11 states report mortality to the federal government. This coverage, however, grows quickly and by 1920 the vast majority of states report their mortality. There is no discernible bias in the to adoption of mortality reporting. As I report later, however, robustness checks using a variety of time controls indicate that year of observation does not determine results.

I use aggregate deaths from all causes in a state as the dependent variable.³ Mortality figures represent deaths occurring in particular states, rather than state of residence and war deaths are omitted.. All causes deaths best represent the overall health of the state, rather than the dangers of one particular disease, while all causes mortality is also a better measure of the scope and effectiveness of aggregate government health effort. I anticipate

³As in France, I later plan to use deaths from specific causes to highlight differences in distribution incentives between different disease threats.

that the array of federal agencies responsible for health in the United States influenced this mortality.

To arrive at the final dependent variable, I adjust raw mortality counts into mortality rates. I gathered the necessary population figures from the Vital Statistics of the United States reports. Yearly US census estimates of population by state were used when that information was not available (US Bureau of the Census 1900-1990). Final mortality rates are per 100,000 of the population. The unit of analysis for the dependent variable is therefore mortality rate from all causes, by year, per state. State mortality trends generally have a high start value in the early period, decreasing over time. These downward trends are not fully linear, however, and individual states experience a great deal of variation over time in their mortality rate. Figure 4.1 illustrates these trends in two states, California and New York.

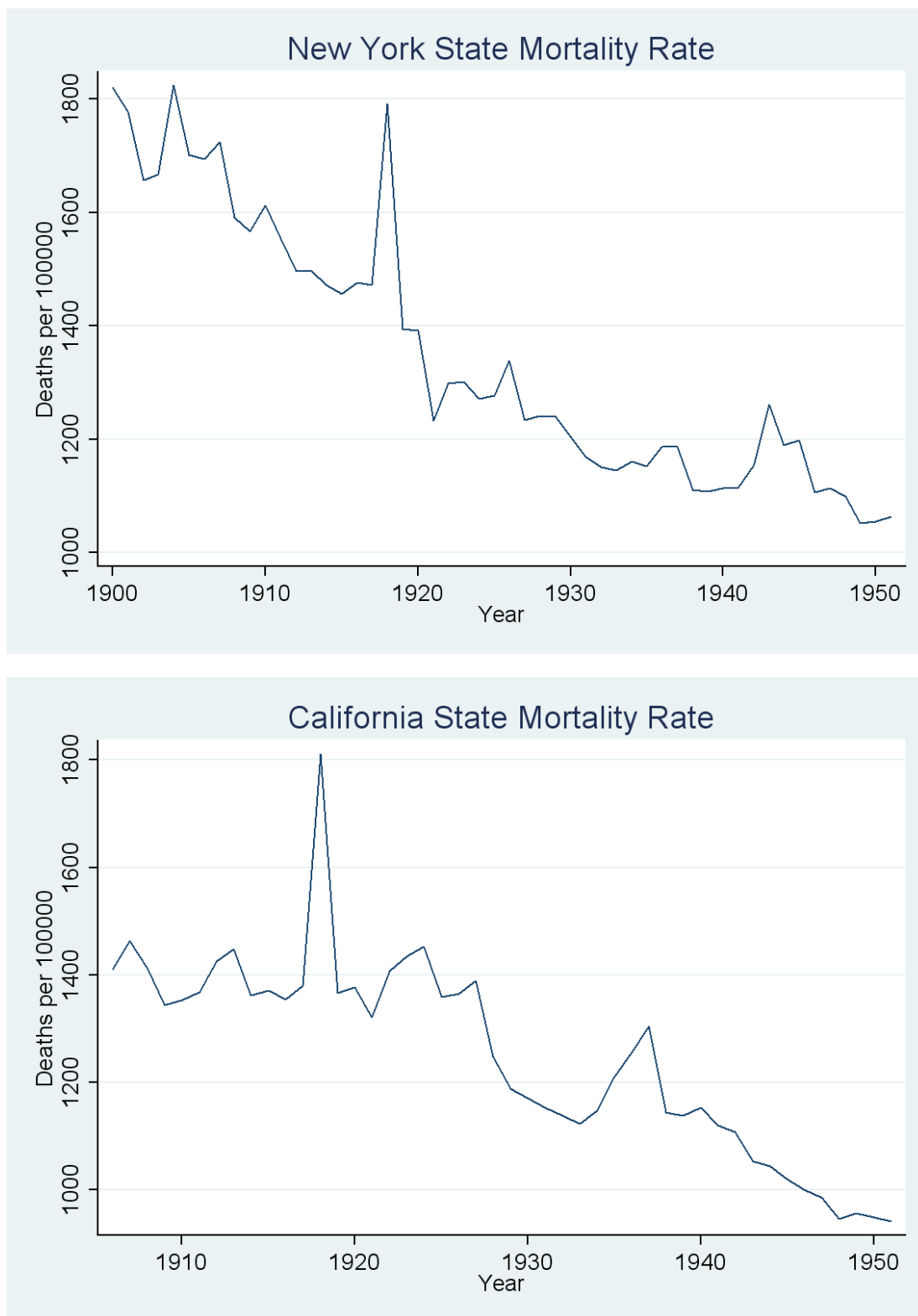
Independent Variables

I derive my hypotheses from the theoretical framework presented in Chapter 2, this time in the context of the United States House of Representatives. I predict mortality rates at the subnational level in the United States due to electoral incentives faced by House members. House members attempted to reduce mortality in states by distributing health through a dizzying array of federal institutions. Since it is virtually impossible to trace all this federal spending, I instead infer federal politician health resource spending in states with lower mortality and hypothesize that the independent variables measuring the theory of health distribution will impact mortality directly. Below, I outline my theoretical expectations and the operationalizations of my hypotheses. Table 4.1 summarizes my hypotheses.

Support for Party in Government

My theory argues that states supporting ruling parties received more health assistance when their party was in power. Parties in power have mobilization and coordination incentives

Figure 4.1: Dependent Variable Distribution



to bolster state health spending using various forms of grants-in-aid and other policy to improve the health of its constituents. Highlighting the coordination incentive, a third party, the Progressives, split the Republican party during the 1910s in part because of a lack of attention by Republican elites to health and social spending. In addition, copious American politics evidence indicates that individual legislators consistently work hard to bring projects home to their districts in the form of pork barrel spending (Ferejohn 1974, Mayhew 1974*a*, Shepsle & Weingast 1981, Bickers & Stein 1996). Politicians ruling the House have control over health budgets, committees, legislation and bureaucracy. Congress can leverage their power over the funding of federal health organizations to dictate the distribution of health resources. As a result, I predict that states voting more heavily during the least election for candidates of parties ruling the House experienced lower mortality rates. I measure this effect using the percentage of House vote share received by the ruling party, aggregated over all districts, in a state during the last House election.

Close Races

Some states matter more than others in ruling parties' calculations for taking and keeping power. They have incentives to maximize the number of seats, rather than the number of votes, that the party wins. Ruling parties, all things being equal, therefore wish to distribute health resources to their voters in marginal districts in order gain swing voter support and win elections. Winning over enough swing voters to change the result of an election is unlikely in states with many safe districts, making them a relatively bad investment of distributive health spending. In the United States, with its single round SMD electoral system, this logic implies that states with more close races will be the target of additional health spending. I hypothesize that this results in better public health and reduced mortality in those states. I operationalize this hypothesis with a measure of close races created by following the American literature's common practice of counting any seat won by more than a 5 percentage point margin of victory in the last election over the opponent as a safe seat

(Canes-Wrone, Brady & Cogan 2002, Mayhew 1974*b*). States with a low percentage of safe districts will experience lower mortality rates.

Pro-Health Party Government Control

I also test the effect of House control by a pro-health party on overall rates of mortality. Pro-health parties place a high priority on improving social conditions and increasing health spending due to a combination of party ideology and high constituent demand for improved health. They disproportionately focused on increasing social spending by the federal government to all states when in power. This resulted in reduced mortality rates across the board when pro-health parties were in power.

Operationalizing this effect is troublesome in the context of the United States for a variety of historical reasons, the most prominent being the ideological heterogeneity on health stances inherent in US parties before party realignment in the 1960s. Southern Democrats, for example, resisted non-distributive federal social programs and provided their own form of patronage to agricultural constituents while other Democrats favored expansions of centralized federal health institutions (Alston & Ferrie 1999). Nevertheless, I test the hypothesis that Democratic party platforms favored improved health from 1900-1950. Democratic constituencies consisted of populations more vulnerable to disease such as northern industrial workers and white rural southern farmers. In response, the Democratic Party initiated increased health and social spending, culminating in sweeping social and health legislation during the New Deal. Overall, I test whether Democrats decreased mortality nationwide with new health programs when they ruled the House in order to disproportionately help Democratic voters.

Pro-Health Party Electoral Strength

I anticipate that pro-health parties with disproportionate ideological and constituent interests in increased health demanded improved health in their districts regardless of the ruling

party. As a high priority issue for these parties and their voters, legislators focused on improving mortality with distribution in their districts throughout the period. Due to this demand, legislative logrolls featuring particularistic health policy was more likely to buy off politicians from pro-health parties.

Due to the heterogeneous party system in the United States with respect to health and social spending, I operationalize the support of pro-health parties in two ways. Democratic constituencies had extensive demands for better health and the bulk of the party was oriented ideologically to supply public health resources using distribution. Democrats expanded social security, health institutions and funded extensive efforts to eliminate mortality threats in its core constituencies in the north and south (Bickers & Stein 2000, 1073). I hypothesize that legislators from states voting more heavily for the Democratic Party secured more health resources and experienced lower mortality.

I also measure the effect of another important pro-health party, the Progressive Party. The Progressives broke from the Republican Party in the early decades of the 1900s, running on a platform of “protecting home and life against the hazards of sickness, irregular employment and old age through social insurance” (Porter 1999, 221). Progressives attempted to pass limited health insurance bills throughout the 1910s and supported a variety of improved health spending well into the 1920s (Funigiello 2005, 7-12). I argue that states where the Progressive Party, the main third party during the period of 1900-1950, received more votes attracted higher health distributive spending. Pro-health Progressive representatives had incentives to provide better health due to their party platform. In addition, in order to prevent rival Progressive candidates from further co-opting their constituents, the Republican Party could prevent Progressive gains among its voters in states with strong Progressive showings using health resources and social spending. I use a proxy, percentage support for third party candidates in the last election, to operationalize this effect.⁴ I hypothesize that

⁴The use of all third parties as a proxy for Progressive vote share instead of Progressive vote share itself is temporary. Nevertheless, an examination of the data indicates that the significant majority of 3rd party vote share was Progressive, so there is no reason to believe results are sensitive to this rough approximation.

states with higher percentages of support for third party candidates in the last election, in practice nearly always Progressive candidates, will experience lower mortality rates.

Legislator Power

My theoretical framework contends that legislator characteristics play a role in the targeting of health resource distribution. Powerful legislators in the House of Representatives can command more resources in the politics of distribution. In it, leadership sits on powerful committees and controls the legislative agenda. Holding institutional powers provides the political leverage that politicians need to pass particularistic policy for their constituents.

To operationalize this power over health spending, I use legislative seniority and Appropriations committee membership. Seniority is an indicator of power because it determined the pecking order within the House. In fact, seniority was probably the most important source of power in the House of Representatives during this period, where the revolt against Speaker Joe Cannon in 1910 entrenched its power (Deering & Smith 1997, 28). Seniority determined rank on committees and senior members controlled legislative activity. As a result of wide ranging legislator advantages, I hypothesize that senior members gained more health related spending for their states than junior members. Therefore, more senior state delegations, regardless of their party identity, reduced mortality in their states.

In addition, I identify legislators with institutional power over particularistic politics using committee membership. I focus on members of the House Appropriations Committee. Membership on the Appropriations Committee was vital to control distributive activities: Fenno (1973) identifies it as one of the “influential” committees. Specifically, it granted members a great deal of leeway over spending on particularistic policy and gave them a prominent role in distributional politics. It was “where the money is” and determined how much legislators and parties received from spending projects, including health projects (Deering & Smith 1997, 67). I contend that legislators sitting on the Appropriations Committee held additional power to bring home funds and improve health conditions in their states. To mea-

Table 4.1: House Electoral Determinants of Lower State Mortality

Hypothesis	Operationalization	Variable Name
Support Govt Party	% Support for Ruling House Party	PctRulingVote
Competitive Races	% Races Won by Less than 5%	PctCloseRace
Pro-Health Govt Control	Democratic Rule	DemHouseControl
Pro-Health Strength	% Support for Democrats	PctDemVote
	% Support 3rd Party (Progressives)	Pct3rdVote
Legislator Strength	Average State Seniority	YrSeniority
	# Members Appropriations Committee	#Appropriations
Legislator Expertise	# Members Commerce Committee	#Commerce

sure this hypothesis, I include the number of House members sitting on the Appropriations Committee in a state at the beginning of a two year House. I expect that states with more members on the Appropriations Committee experienced lower mortality.

Legislator Expertise

In the House of Representatives, committee membership also defines legislator information and expertise over policy areas. In Congress, legislators perform an informational function for their parties by becoming experts in particular areas in order to inform the rest of their party on issues (Krehbiel 1992). This gives legislators with specific expertise additional power and flexibility to distribute resources in subjects they are expert in. During this period of the House of Representatives, the standing Committee on Interstate and Foreign Commerce controlled all matters related to health (Schamel, Rephlo, Ross, Kepley, Coren & Bradsher 1989). It oversaw all bureaucratic organizations like the Public Health Service and was responsible for shaping health related bills and policy. I hypothesize that this expertise gave Interstate Commerce Committee members extra political leverage to distribute health spending. To measure this effect, I calculated the number of Interstate Commerce Committee members a state contained at the beginning of the most recent House. Consequently, I expect that states with more members of this committee experienced lower mortality.

Controls

The model also includes a number of control variables. Mortality rates were determined not only by political distribution but also by a number of other factors. First, public health history indicates that health crises were more easily dealt with in cities. More densely populated urban states were more efficiently served by both private and government sanitation and medical care measures. This contrasted with the inherent difficulties in serving rural populations with public and private health resources. Each dollar spent in densely populated states served more individuals. To measure urbanization, I generate population density per square mile figures. I predict that states with high population per square mile experienced lower mortality due to more efficient and effective public health measures, sanitation and medical care.

It is critical to control for income in my analysis. Private health care and nutrition play a role in reducing mortality independent of federal politics. Higher incomes allow individuals to seek better care more often and give states a broader source of revenue to draw taxes to bolster their own public health efforts. They also allows individuals themselves to maintain higher nutritional standards, making them less susceptible to initial infection and better able to fight off disease. I anticipate that states with low income suffered higher mortality rates. I measure this effect on mortality in two ways. I include aggregate yearly national GDP per capita figures. Years where the United States experienced poor economic conditions, such as the Great Depression, led to lower incomes for individuals and fewer resources for states and localities to provide public health with. Higher GDP predicts lower mortality.

In addition, I proxy for variations in state income within the United States. States in this period were unequal with regard to levels of development, in particular in the West and South. To account for this inequality I turn to internal revenue receipts, with higher federal tax revenue proxying for higher income. For the period in question, save for the earliest years, dollars from income tax make up the bulk of federal income receipts. States where

the federal government gathered more income taxes per capita indicate higher income. I therefore expect that higher federal tax revenue is connected to lower mortality in states.

Data

In order to measure the electoral incentives for health distribution in the United States, I use electoral data for the House of Representatives provided by Swift, Brookshire, Canon, Fink, Hibbing, Humes, Malbin & Martis (2004). Their database contains constituency level results for all House elections during the period in question. I split party totals into three categories: Republican, Democrat and other parties. In practice, the vast majority of other party observations during general elections are from Progressive candidates in states like California and Wisconsin. I then aggregated all House race vote totals to match the state level mortality data. All observations of electoral data are from the the most recent House election in a state. To measure the competitiveness of House races in the state, I noted House elections that were won by less than a 5% margin of victory over the closest opponent in the last house election. I then calculated the percentage of races that were won by less than 5% in the state in the last election.

In the United States, detailed data are available for the careers of legislators in the House of Representatives (Swift et al. 2004). First, I generated a state delegation seniority variable from legislator data. I averaged cumulative years of House service at the beginning of the House in question across all House members from the state. The same dataset contains full committee membership information for all House members. Using this data, I identified House members appointed to either the Appropriations or Commerce committees at the beginning of the Congressional term. I then created a count of the number of House members sitting on each of these committees in a state's House delegation.

To measure population density, I drew from yearly Vital Statistics reports of population and state size in miles (US Bureau of the Census 1900-1936, US Bureau of the Census 1937-1960*b*). Alternatively, when population was not available in Vital Statistics reports, I used

estimates generated by the census bureau of state population levels (US Bureau of the Census 1900-1990). The final density variable is measured in state population per square mile.

I use Maddison's (2010) measure of US national GDP per capita to measure income levels. This measure is adjusted to 1990 currency units to account for inflation and make years comparable. At the subnational level, historical reports made little effort to measure individual or state aggregate income or income equality. Only four national wealth estimates were conducted through the 1900-1950 period and so are insufficient for the analysis. I instead turn to internal revenue receipts by state for each year (US Bureau of the Census 1900-1960*a*). Higher federal tax revenues proxy for higher state income. For most of the period in question, save for the earliest years, receipts from income tax make up the bulk of federal income receipts.⁵ States where the federal government gathered more income taxes indicate higher income. Finally, to make years comparable, I transform all internal revenue receipt income into 1982-1984 dollar values and adjust tax figures to per capita values using state population.

In Table 4.2, I provide summary statistics for all the independent variables included in the House of Representatives quantitative tests. All variables have significant variance over both time and geography.

Testing and Results in the United States

The mortality dependent variable is a continuous variable that displays considerable variation. As a result, I perform OLS regression. I have no theoretical reason to expect a non-linear data generating process for the US all causes mortality rate and instead expect incremental over time changes.⁶ I account for unobservable innate differences between states

⁵Nevertheless, some portion of these income receipts are gathered from other taxes: customs, tobacco and spirits, inheritance taxes or even stamp income.

⁶This assumption may change if predicting specific disease mortality: certain programs and vaccines specifically targeted a variety of diseases and swiftly eradicated them.

Table 4.2: Summary Statistics

	Mean	Standard Deviation
Mortality Rate	1161.161	241.884
PctRulingVote	0.525	0.203
PctClose Race	0.341	0.290
DemHouseControl	0.608	0.488
PctDemVote	0.511	0.215
Pct3rdVote	0.027	0.112
YrSeniority	5.460	2.991
#Appropriations	0.726	0.805
#Commerce	0.509	0.689
USA GDP/Capita	6947.904	2112.352
Federal Revenue/Capita	1413.772	2923.142
Pop Density	88.992	114.032

using fixed effects. This includes physical characteristics like climate, specific endemic disease vulnerabilities and cross sectional social and economic constants. Since House races occur every two years, any concerns about deflated standard errors and repeated observations are much reduced when compared to the French or Indian testing.

In the United States, I again do not model spatial dependence due to the breadth of the dependent variable. Deaths from all causes in the United States included a huge number of causes, many not contagious, with no single contagious diseases driving the mortality rates, with the possible exception of influenza in 1919. States are a massive geographic unit, further reducing the possibility of a distinct spatial dependence effect on mortality, while the year is a long period for disease to spread state to state. Because of this, it is unlikely that mortality from all causes in a single year and state depended on its neighbors and I do not control for spatial considerations.⁷

Table 4.3 shows the results of the model predicting state mortality directly with political variables. Other models with alternate specifications were run to check for robustness but are not shown. These models included a lagged dependent variable model, year and year

⁷It is still a worthwhile to check for robustness in future work.

squared linear trend models and robust standard errors for year. The primary effect of these models was on the coefficients and standard errors of variables measuring the effect of Democratic control of the House and Democratic vote in states and a few reduced effects of Appropriations and Commerce Committee members. The interpretation of the other variables remained largely the same. I discuss the problems with the Democratic Party variables and their likely cause when discussing the base model's findings for these variables.

Table 4.3 shows the statistically significant mortality consequences of elections. Examining the model, there is broad empirical support for my theory predicting the US House's incentives to distribute health to politically important states. With respect to elections, there is evidence that the ruling party protects its own voters. The strategic hypothesis also bears fruit and states with higher percentages of close, competitive races have lower mortality, as expected in an SMD system. If mortality changes are indicative of stronger federal public health efforts, as French data show, ruling politicians bolster infrastructure and specific health measures in states dominated by ruling parties core supporters while they simultaneously attempt to distribute health to swing voters in states with close races. By contrast, the effects of pro-health parties are mixed, which may be unsurprising given the US party system. Finally, variables measuring the expertise and power of legislators, as expected, predict lower mortality for their states.

Evidence here supports the importance of party and constituency service to districts voting for the ruling party in the House in the United States. The substantive impact of voters having their party in power in the House is striking. I graph this relationship in Figure 4.2. The mean mortality rate in the sample is about 1200 deaths per 100,000. Hypothetically switching from a ruling party stronghold state with 73% of House votes to a 33% opposition stronghold, a one standard deviation above and below the sample mean of the PctRulingVote variable, predicts a mortality rate increase of 23 deaths. This corresponds to a 2% increase over the mean mortality rate. House parties and legislators in power appear to ensure that states with their supporters see better health outcomes than heavy opposition

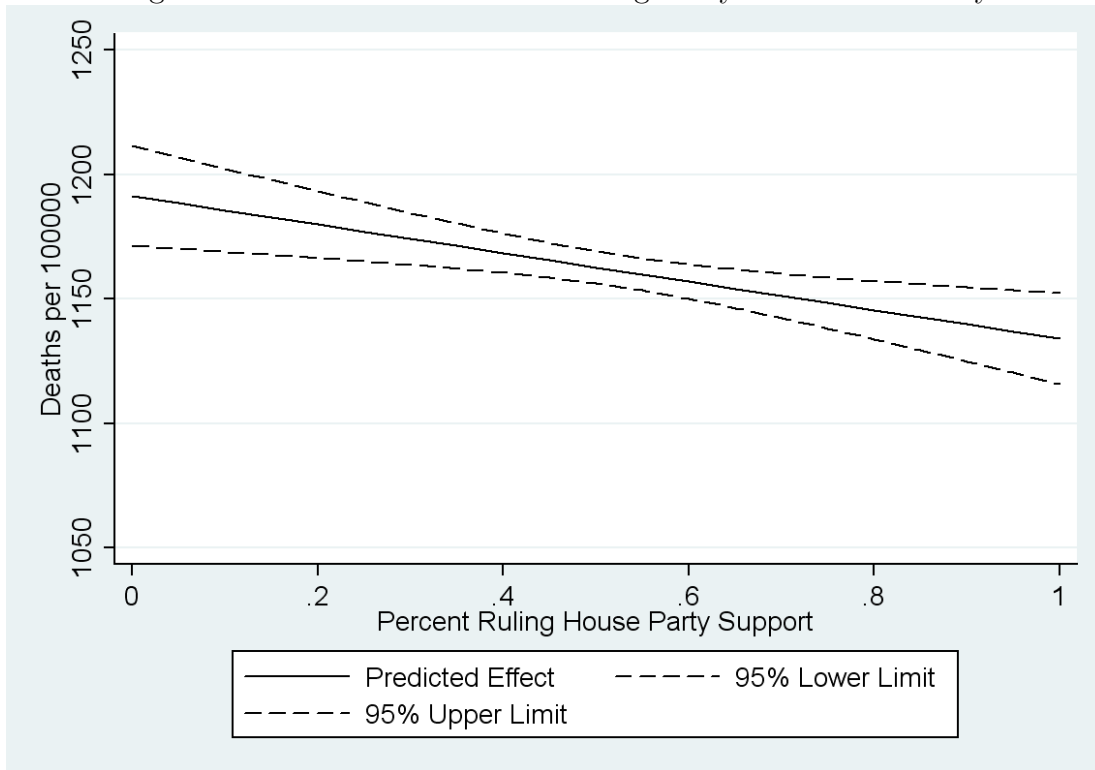
Table 4.3: House of Representative Predictors of State Mortality

	Mortality Rate
PctRulingVote	-57.367* (18.417)
PctClose Race	-29.924* (14.429)
DemHouseControl	-5.839 (8.511)
PctDemVote	-118.947* (58.423)
Pct3rdVote	-84.523 (54.236)
YrSeniority	-4.507* (1.554)
#Appropriations	-17.521* (6.397)
#Commerce	-16.661* (7.192)
USA GDP/Capita	-0.022* (0.002)
Internal Revenue/Capita	-0.004* (0.002)
Pop Density	-3.014* (0.137)
N	1783

Model estimated using OLS regression. Coefficients presented and, in parentheses, standard errors. Fixed effects coefficients omitted.

* p-value less than .05

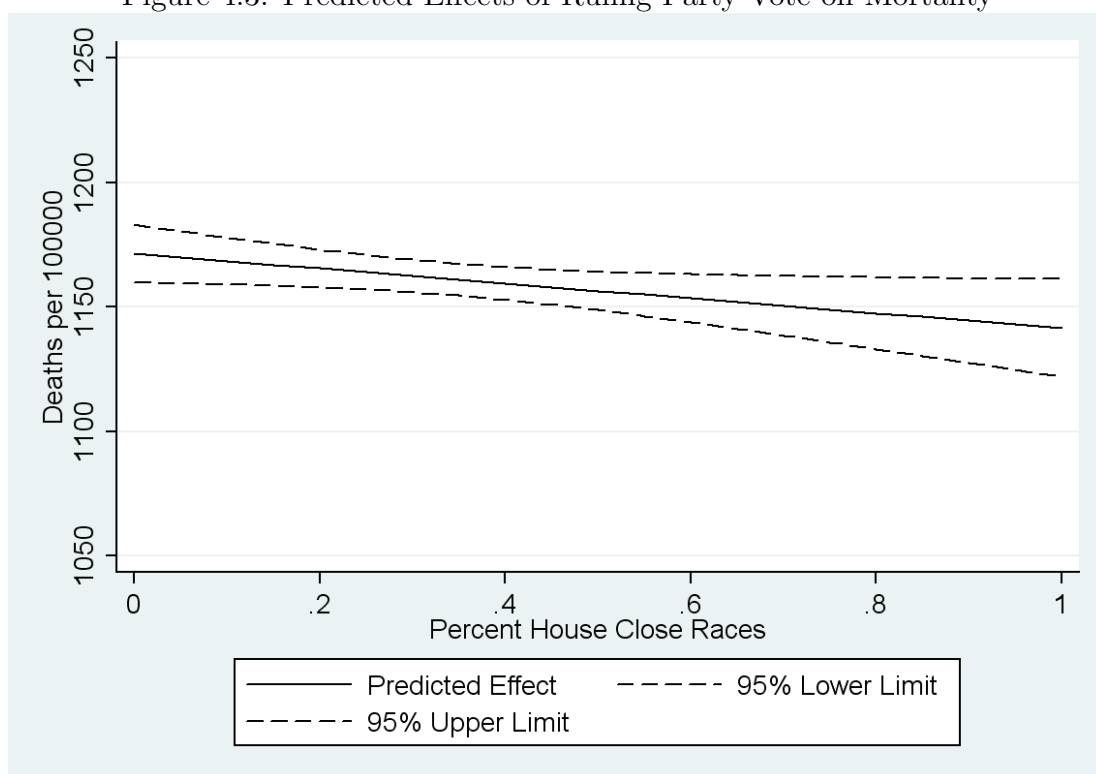
Figure 4.2: Predicted Effects of Ruling Party Vote on Mortality



states.

Similarly, intensity of electoral competition determines state mortality rates. Figure 4.3 shows the size of this relationship. Its relationship is of a slightly more modest size than the effect of government supporters. Moving from a competitive state with 65% of districts heavily contested, such as a swing state in the midwest, to a state composed of all safe districts, often a Southern state dominated by entrenched Democrats or a northeastern Republican stronghold, leads to approximately 20 more deaths, an increase of about 1.7% in mortality for the average state. These tests suggest that politicians focus their efforts to improve health in states where there is the possibility of winning or losing seats. Buying votes with improved public health makes the most sense for politicians in states with many close races, so they seek to improve public health and decrease mortality in order to win elections.

Figure 4.3: Predicted Effects of Ruling Party Vote on Mortality



Variables measuring the effect of pro-health Democratic partisanship exhibit mixed results and point to larger issues involving the meaning of party ideology in the United States with respect to health. There is no support for an across the board reductive effect of Democrats holding control of the House. Democrats do not appear to be the party of better countrywide health, despite the substantial increases in health spending during Democratic rule in the 1930s and 1940s. The hypothesis that states voting heavily Democratic experience lower mortality is, however, borne out. This model predicts a massive 59 death decrease when considering a stronghold with 50% additional support for the Democratic Party. These results, however, do not survive robustness checks and alternate specifications accounting for time. All coefficients measuring Democratic pro-health incentives are volatile. Depending on specification, Democratic vote and House control may predict higher, lower or no effect on mortality. This suggests a more subtle relationship between the Democratic Party and health, not captured by this specification.

Contrasting all these results with the pro-health party hypotheses in the French case, this may not be surprising. While some Democrats tried to increase spending due to an ideology of higher social spending in order to assist poor workers and struggling farmers, other Democrats resisted all attempts to improve state and district health using federal spending. The Democratic party was hardly a clear undivided left party of social spending and health improvements like the French SFIO and Communists were. The meaning of left and right with respect to health in the United States is far murkier than in France. These tests suggest that the heterogeneous umbrella parties in the United States defy simple classification with respect to health. No party in the United States from 1900-1950 is a purely pro-health party ideologically. Instead, certain parts of both the Republican Party and Democratic Party supported improvements in public health for their constituents. As a case in point, qualitative work suggests that Southern Democrats were not concerned about providing systematic programs for the most vulnerable poor populations in the south, including African Americans and rural white farmers. They instead ran their own, non-governmental, patronage health

systems and broadly opposed federal programs improving social spending, including the New Deal programs involving comprehensive health care (Alston & Ferrie 1999, Orloff 1988). In the United States, there is no robust evidence to suggest that Congress bought off Democratic pro-health constituencies with improvements in health or that highly Democratic constituencies demanded additional health improvements over other parties' constituents.⁸

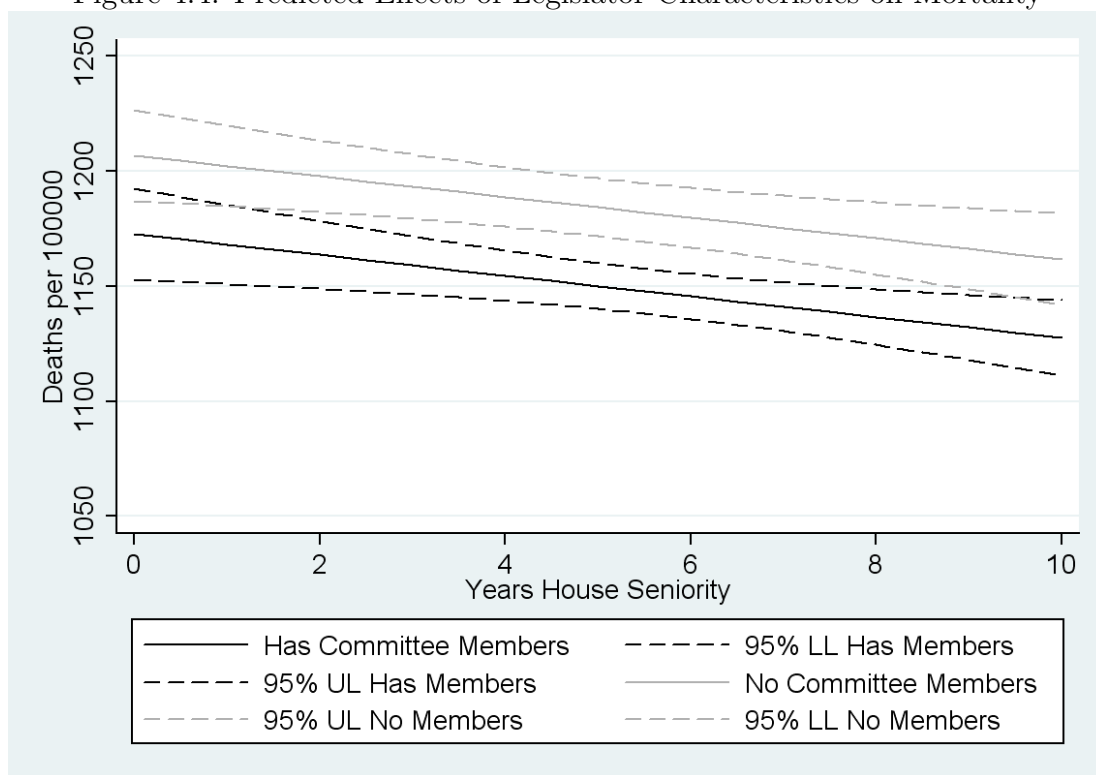
By contrast, percent third party support, usually representing Progressive candidates from 1900-1950, is generally weakly associated with improved health. This makes sense given that modernizing and improving health was unquestionably one of the main planks of the Progressive party platform. Progressive challengers forced both the Republican and Democratic party to use health as distribution to satisfy their demands. Even when Progressive candidates did not win, and they won only rarely, they may have exerted significant pressure on winning candidates to improve health at home to address Progressive voter concerns. I find that having a 15% third party vote in the last election, well below Progressive results in areas of strength like Washington or California where Progressives gained significant representation, predicts a decrease in mortality rate by 13 deaths or 1% of the mean.

Finally, legislator characteristics were important in the US. This fits with common wisdom about the American system that suggests that personal politics plays a dominant role in distribution because of its relatively weak party system. House seniority has a significant and negative effect on state mortality. After the revolt against Joe Cannon in the House, seniority almost completely determined legislators' capacity to alter and push through bills in committees. A more senior house delegation was associated with a 4.5 death reduction in their state per year of average seniority. This effect is shown graphically, along with the effect of committee membership, in Figure 4.4.

House legislators' membership in committees that affected their ability to improve health

⁸This suggests future work. In order to tease out the true relationship between the Democratic Party and health outcomes, it may be necessary to split the party and identify the Democrats that truly fit the definition of an ideologically pro-health party.

Figure 4.4: Predicted Effects of Legislator Characteristics on Mortality



were also associated with lower mortality. Appropriations is one of the prestige committees in the House and legislators on it had additional power to distribute particularistic resources like public health. Each additional member a state has on the House Appropriations committee, the body responsible for most particularistic spending in the House, leads to 17.5 fewer deaths in that state, a mortality reduction of 1.5% of the mean. Expertise also appears to play a role in distribution. The Committee on Interstate and Foreign Commerce was the House committee considering health legislation and oversight over federal institutions of public health like the Public Health Service. Supporting my hypothesis about the ability of expert legislators to distribute, states with members on the Interstate Commerce Committee experienced almost 17 fewer deaths per House member on the committee. These committee effects are shown in Figure 4.4 using contrasting two scenarios: the Committee Members line (black) represents a state with one member of the Appropriations committee and one member of the Commerce committee while the No Members line (grey) shows the model's predictions if a state has no members of either committee.

Overall, my empirical results suggest that political variables had an important effect on US mortality rates from 1900-1950. Save for the effect of pro-health parties, which is perhaps obscured by the lack of a pure pro-health and social welfare party like the socialists or communists in the US, the results support the theory developed in Chapter 2. While I cannot observe the spending House members undertook to improve health in this period due to the fragmented nature of federal health efforts in the United States, my qualitative results suggest that politicians engaged in distributive health behavior targeting states and diseases. Meanwhile, they opposed all efforts to reduce their powers over the distribution of health spending. The quantitative results then show that House member electoral incentives altered the subnational distribution of mortality. Politically important constituents experienced lower mortality rates in the US, illustrating the profound effect of distributive health policies on the health of citizens in democracies.

Chapter 5

India 1971-1999

In contrast to the other cases, I next test my theoretical framework in the context of a modern developing country, India. Patronage politics dominate Indian democracy. Given this political reality, I expect that Indian politicians distributed health resources to the politically important, rather than those needing state health support. Anecdotal qualitative evidence supports this hypothesis, as recent Indian government programs seek to redress “very large” inequalities of health outcomes throughout India through major increases in expenditures to under served states with the National Rural Health Mission (Deolalikar 2005, 11)(Yip & Mahal 2008, 929). In order to find out if political incentives created these severe inequalities, I test the theoretical framework introduced in Chapter 2. Specifically, I match Indian electoral and spending figures with health data and link central politics to state medical expenditures and state health outcomes. I show that distribution decisions by Indian national politicians affect health outcomes in states, linking central grants to infant mortality. In India, as in early France and the United States, national politicians played a deadly game of political favoritism to certain constituencies that shaped health outcomes.

5.1 Indian Health and Politics

Post independence, five year plans, set by the center and overseen by the Ministry of Health and Family Welfare, determined the broad thrust of most health initiatives (Gupta & Bhandari 2010, 99). In practice, Indian health spending was primarily the domain of Indian states. Studies note that Indian state health spending is highly unequal, with certain

states spending many times the amount of other states (Deolalikar 2005, 27). This created a matching inequality in infant mortality throughout India (Mahal & Fan 2010). Driven in part by income, a gap between various states emerged over time, leading to relatively poor health outcomes in India relative to its aggregate income levels (Bhandari & Sinha 2010).

Central politicians in India affect health outcomes using grants and special programs. In total, these grants account for about a quarter of all health funds, with significant disparities in amount of central health aid distributed between Indian states (Deolalikar, Jamison, Jha & Laxminarayan 2008). Despite its relatively limited share of health spending the central government is “dominant” in public health, family welfare and communicable disease control programs (Deolalikar et al. 2008, 986). These programs have a potent effect on overall public health and mortality rates, as they primarily help the poor and sick. Through the choices made with its grant programs, the central government has a direct hand in determining overall mortality rates in Indian states. The center, therefore, is disproportionately responsible for helping individuals who would otherwise receive inadequate or no medical care.

A specialized literature exists that seeks to find out the outcome effects of this central and state health spending in India (Deolalikar 2005, Bhalotra 2007, Farahani, Subramanian & Canning 2009). These studies find some effect of health spending on mortality rates, especially among the poor and rural areas, and report a relationship between income of states and their overall levels of health. By contrast, very little work attempts to explain the priorities of Indian government health spending programs. Work that does so only explores the economic determinants of state level social spending (Tsujita 2005). Here, my theory of health distribution of health provides insight, as I argue that the distribution of these central grants cannot be explained solely by need or state economic conditions. Indeed, recent reforms of Indian health spending call the distribution decisions of its previous programs into question. India initiated the National Rural Health Mission in 2008 to address the inequality of spending and outcomes through major increases in central expenditures on particular problem states, called “Empowered Action Group” states (Deolalikar et al. 2008,

Yip & Mahal 2008). Furthermore, Indian democracy is known for its elaborate systems of political patronage and pro-rural politics (Varshney 1995), lending credence to the hypothesis that politicians altered the distribution of health funds in India. In light of this suggestive evidence, I apply my theoretical framework to India from 1971-1998, in order to test the determinants of health distribution, this time in the context of a modern developing state.

Indian Politics and Institutions

Before continuing further, it is helpful to briefly discuss the basics of Indian elections and political institutions.¹ Organizationally, post-independence Indian institutions are federal. India is split into twenty eight states of varying sizes and nine relatively small Union Territories, such as the Andaman Islands or city of New Delhi. Both the states and the nation have legislatures, with powers explicitly split between them by the constitution. In practice, national politicians dominate states, particularly under the rule of the Indian National Congress, because the center has the power to appoint the relatively powerful state governors.

India uses a modified Westminster system of political institutions, with an lower house (Lok Sabha) and upper house (Rajya Sabha) of parliament. The Lok Sabha must hold elections every five years while the Rajya Sabha is elected from the state legislatures. Early elections are possible with the agreement of the Prime Minister and President.² Parliamentary races are run in single member districts (SMDs) apportioned within states. These elections are often contested by many candidates from regional and national parties. Ethnicity, religion, linguistics and social caste all divide India, causing identity to often dictate Indian politics. This further reinforces the significance of regional and smaller parties. Critically, since India is poor, and was particularly so during the 1971-1998 period, particularistic

¹For a full description of Indian political institutions, which this description is largely drawn from, see Brass (1994).

²The President is a relatively powerless position nominated by the upper and lower house along with state legislatures.

distribution heavily influenced elections and “local politicians [knew] very well the salience of [material] priorities and most strive to satisfy some of their needs through channeling of state funds and patronage of their supporters” (Brass 1994, 99). This electoral environment provides fertile ground for distributional politics on specific issues such as health.

5.2 Testing Central Politics, State Spending and Health Outcomes in India

In India, divided responsibilities for spending on health complicate any statistical analyses. In particular, accounting for central grants and state spending requires an additional layer of quantitative testing. For now, I focus on the incentives of Indian central government parties and politicians to target certain states over others with central grants.³ I then predict state level spending on health as a consequence of central grants and measures of state financial capacity. Finally, overall state medical expenditures on health predict infant mortality rates, a key bellwether of overall health in developing democracies, linking health spending to health outcomes. I show that central political incentives help determine central grant distribution patterns and that those grants in turn alter medical expenditure and finally infant mortality rates within Indian states.

The Determinants of Central Grants to States

The first test that links Indian government choice to health outcomes is a quantitative model predicting how politics affected central government distribution to states. Federal institutions split the Indian health system into state and central health funding contributions. While the center spends a minority of the overall funds for health, it accounts for much of the

³With an additional extensive data collection effort, state politics could be included in a combined analysis. I discuss the opportunity to include aspects of Indian state level politics in these tests later in the chapter.

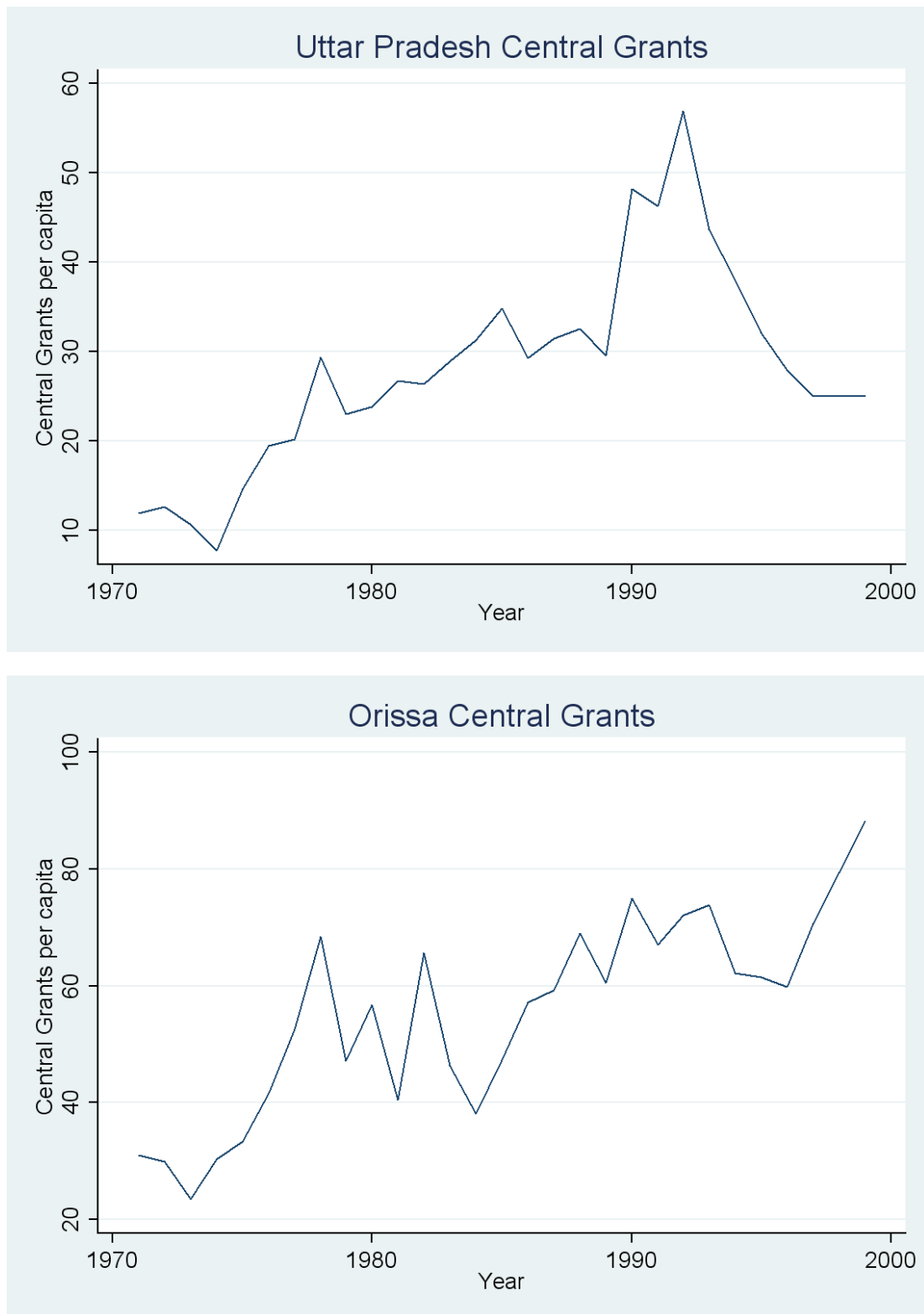
critical public health and communicable disease portions of that funding. As a consequence, decisions by the central government about where to allocate central money involve potentially deadly trade-offs between Indian voters.

I operationalize central government health distribution priorities by measuring grants to Indian states, using it as a dependent variable in the analysis of central political incentives and health spending. Since central government grants for health are filtered through numerous programs, 42 in 2000 (Gupta & Bhandari 2010), no easily available single measure of central government expenditure on health by itself exists. Instead, I use an aggregate measure of all central government grants to states. This necessarily loses a desirable level of granularity, introducing the possibility that my models instead predict other, non-health related, forms of spending. If these non-health forms of aggregate central grants obscure the effects of the health distribution within them, we will observe no significant mortality effects of grants on mortality, making the choice to use an aggregate measure a relatively conservative test of my hypotheses. Aggregating to all central grants also has the attractive quality of incorporating every form of central spending that reduces mortality and supplements public health such as major sanitation or other infrastructure grants, which may not otherwise be included in a measure confined purely to health spending under the auspices of Ministry of Health and Family Welfare.⁴ I expect that the political incentives faced by central politicians alter the flow of overall central grants to states, in turn affecting state level health spending and mortality rates. Figure 5.1 shows the distribution of central grants over time to two states: Uttar Pradesh, in the heart of the northern Hindu belt, and Orissa, an extremely poor state located on the Indian ocean.

Next, I operationalize my theoretical framework in the context of Indian health spending and summarize the information in Table 5.1.

⁴That said, it may be possible to acquire specific central health spending figures from Indian budget documents. This would require extensive additional primary source research and is worthy of future study.

Figure 5.1: Central Grants Dependent Variable Distribution



Levels of Government Support

My theory anticipates that Indian politicians rewarded states with health grants where more of their own core voters resided. Health spent in these states had the highest probability of reaching party supporters. Grant money spent on government supporters rewarded voter turnout in general elections and provided benefits to core voters that incentivized them against joining new parties. Government parties in India may have been especially concerned with new party formation, since India's party system fragmented considerably over time; regional parties emerged around 1989-1990 to challenge the large nationwide political parties, especially the Indian National Congress (Gould & Ganguly 1993, Chakrabarty 2006, Lefebvre & Robin 2009).

Governments in India during period in question, 1971-1998, often consisted of single party rule by the Congress. This is because the center-left Congress party, along with later the Hindu nationalist Bharatiya Janata Party (BJP), possessed the main nationwide party organizations and platforms that contested general elections. In the 1970s and 1980s, this resulted in clear majorities for Congress with only one interlude in government by a coalition of opposition parties. By the 1990s, however, Congress' hold on the government loosened: coalitions of parties like the National Front, United Front and BJP led National Democratic Alliance, along with multiple minority governments, governed India. To operationalize the effect of rewarding core supporters at the state level, I calculate the percentage of voters in a state voting for ruling parties. I aggregate vote totals across SMDs within Indian states. For coalitions, I aggregate votes given to all members of the coalition. I expect that states with more government voters in the last general election received additional central grant money.

Close Races in States

Indian political institutions create incentives for politicians to target swing voters in certain districts. Parties want to target Indian voters in SMDs with close races using particularistic

policy. The conversion of just a few swing voters in these districts could mean additional seats for Indian parties. In a country with high mortality rates and significant communicable disease problems, I argue that health funds are an attractive form of distribution for voters. To secure votes, then, parties promise additional health funds to voters in areas where they participated in close races, rewarding them with health funding when they enter government and earning strategically important votes for future electoral races.

Indian general elections feature intense competition at the district level. National parties struggle between one another throughout the country, but also face constant challenges from powerful regional parties. In fact, in recent elections national parties fight head to head in only about one-sixth of constituencies and most winners gain less than a majority of votes, highlighting the importance of gaining just a few votes in Indian elections (Chakrabarty 2006, Lefebvre & Robin 2009). In this electoral context, Indian politicians in government were motivated to target states with central grants where they felt heavy competition. To measure this effect, I calculated the percentage of SMD races in a state where parties currently in government either won or lost a seat in the last election by less than 5% of the vote.⁵ I expect that parties sent states with many close constituencies in the last election additional central grants to fulfill promises and maintain or win close seats in the next general election.

Communist Party Support

Delivering more public health spending to their voters is the specific focus of certain parties. These parties have explicitly pro-health party platforms and emphasize improvements in health outcomes among their constituents. In India, the largest far left parties, the Communist Party of India, the Communist Party of India (Marxist), the Revolutionary Socialist Party and the All India Forward Block, sometimes called the Left Front, fit this party platform in the 1971-1998 period. In the immediate post-independence era the Communist

⁵Since 5% is primarily derived from the American literature, I performed specifications with other thresholds for “competitive” races with similar results.

Party Marxist Branch and Communist Party occasionally involved themselves with social revolution and a potential overthrow of Indian capitalism (Guha 2007, 288-305, 422-427), but by the late decades of the 20th century transformed into broadly statist, pro-equality and pro-social welfare parties (Ahuja 1998, 232-233). These parties present ideological appeals to voters based in part on improved social conditions, pushing for major increases in social spending and health improvements from the coalition governments they supported (Brass 1994, 79-84). As a result, I anticipate that states supporting these parties in general elections were easily bought off when not in government using expansions in health programs and additional health funding. I measure this effect using the aggregate state vote share obtained by these four parties in the last Indian general election. I hypothesize that higher support levels for these parties was associated with increased central funding for health.

Union Ministers

In order to measure the individual ability of legislators to influence the distribution of central health funds, I turn to the presence of cabinet ministers. In a Westminster parliamentary regime such as India, ministerial portfolios are the most potent sign of legislator power. Ministers are generally senior members of their party with a great deal of influence within the party. Cabinet positions are much sought after rewards for service. In addition, ministerial portfolios give legislators control over a certain branch of government bureaucracy, giving them additional policy powers. Ministers, who are also legislators responsible to their home districts for reelection, have incentives to favor home states using the increased political resources at their disposal. They can use this power directly to alter central funding, or, alternatively, bargain to exchange the benefits they control under their portfolio with other legislators for particularistic policy.

In India, cabinet ministers must come from either the Lok Sabha, the lower house of parliament, or the Rajya Sabha, the upper house. Most are appointed from the Lok Sabha. Regardless of their house of origin, all ministers are in some way electorally beholden to their

Table 5.1: Determinants of Increased Central Grants to States

Hypothesis	Operationalization	Variable Name
Govt Support Level	% Support for Govt	PctGovVote
Govt Close Races	% Districts Govt Party Competitive	PctCloseRace
Pro-Health Strength	% Support for Left Front Parties	PctComVote
Legislator Strength	# Cabinet Ministers	#CabMinisters
Legislator Expertise	# Senior Health Officials	#HealthMinisters

home states; lower house ministers because they are elected in SMD races within their states and upper house members due to their selection by home state and territorial legislatures. My theory anticipates that states with many powerful cabinet level Union Ministers will receive additional central funds to address health concerns in their districts.

Top Health Officials

Top health experts hold the upper hand in the distribution of health funds in India. Their expertise in health matters and their ability to manipulate central health institutions to their advantage give them the ability to distribute health funding to their states. While legislators specializing in health policy may not have the broad powers over policy of cabinet ministers, they have a specialized ability to affect health spending and outcomes. In India, the Ministry of Health and Family Welfare accounts for the vast majority of important central health functions (Gupta & Bhandari 2010). As a consequence, legislators affiliated with the Ministry could alter the flow of funds to favor their own states. I operationalize this hypothesis by counting the number of legislators from a state functioning as either Union Minister, Minister of State or Deputy Minister in the Ministry of Health and Family Welfare. I argue that these states will receive additional central grant funding.

Demand

An alternate explanation for the amount of central grants sent to a state is its need for central funds. To address this effect in my quantitative model, I include a measure of the demand for health funding. If the government distributes using a need based approach when choosing central grant funding patterns, it should distribute more funds to states with poor well-being indicators in order to address inequalities in state health funding and performance. I operationalize demand using lagged infant mortality, expecting that states with high infant mortality in the previous year needed and received more funds from the government in the current year.

Data

Data availability restricts my testing to the aggregate Indian state level. While the districted nature of Indian political competition generates interesting testing possibilities at the sub-state level, sub-state health, government and financial data are exceedingly scarce. As a result, I aggregated all political variables to the state level and pair them with yearly state level mortality, economic and public finance data. In addition, only the fifteen largest and most populous Indian states have data on infant mortality available, restricting testing to those states. I provide summary statistics for the variables used in all three of my tests in Table 5.2.

I tested the political hypotheses using Indian general election outcomes from the Lok Sabha lower house, by far the more powerful of the two chambers. I drew the government vote, close race and pro-health party electoral strength measures from the Constituency Level Election Archive dataset on Indian elections from 1978-1999 (Kollman, Hicken, Caramani & Backer 2010). I supplemented this dataset by collecting a constituency level election dataset for the 1971 general elections drawn from primary source materials (Electoral Commission of India 1973). All yearly electoral data describe state electoral conditions from the last

Table 5.2: India Summary Statistics

	Mean	Standard Deviation
PctGovVote	0.404	0.160
PctCloseRaces	0.132	0.117
PctComVote	0.085	0.134
#HealthMinisters	0.172	0.413
#CabMinisters	1.149	1.233
Central Grants/cap	30.140	18.542
Infant Mortality	89.171	33.338
Medical Expenditure/cap	18.967	7.897
State Tax Revenue/cap	463.961	472.276
State Domestic Product/cap	1318.367	560.686
Inequality	27.983	5.444

general election. In years with a general election, that year's observations refer to the new election if the election occurred in the first half of the year or the previous election if election day was in the second half of the year.

For the government vote variable, I used historical sources to identify the partisan composition of governments. This was relatively straightforward, with a single party being in power for most of the period and distinct coalitions forming to rule during coalition governments in the late 1970s and 1990s. I then aggregated the number of votes earned by all parties in government, in all districts, to the state level and generated the percentage vote received using valid votes cast figures. Similarly, constituency level returns identify close races involving the government. I aggregate the number of races in a state identified as close using a 5% margin of victory and aggregate those to the state level by creating the percentage of close districts involving government parties in the state. I created communist vote share by identifying Left Front (CPI, CPI (M), RSP and FB parties) candidates and aggregating their vote totals to the state level, arriving at a final figure of percent of votes received by far left parties.

Kohli's (2000) comprehensive documentation of post-independence Union Governments

provided information suitable for identifying cabinet ministers. From 1971-1998, I noted the state of all Council of Minister's home districts for Lok Sabha appointees or the state of origin for Rajya Sabha ministers.⁶ I then aggregated this data to the number of ministers representing a state in a given year. To identify health specialists, I calculated the number of individuals associated with the Ministry of Health and Family Welfare, the institution in charge of administering health related policies, in a state. Council Ministers, State Ministers and Deputy Ministers were counted for this purpose.

The economic and mortality data used in my analyses comes from Bhalotra's (2007) work on the link between health spending and mortality. Bhalotra (2007) gathered this information from the Indian Reserve Bank and Indian public finance records, supplementing data compiled by Besley & Burgess (2004). Unfortunately, only figures for overall central grants to states data exist, with no specific data on central grants specifically addressed to health. All financial figures are per capita, deflated to 1973-1974 prices. I measure health outcomes using total infant mortality rate for all of my analyses. Bhalotra (2007) generates infant mortality rate by state by aggregating survey responses to the state level of a major Indian social survey, the National Family Health Survey, from 1971-1999. Data generated from this survey are available for fifteen of India's states, restricting the scope of the analysis somewhat. The states available, however, are India's most populous and important states.⁷

Politics and Central Grant Distribution

The central grants model presented uses OLS with a dependent variable of central grants in rupees per capita from 1971-1998. I include fixed effects in the model to account for any unobserved heterogeneity of grants to Indian states. This controls for static factors

⁶Indian governments contain three types of ministers: the Council of Ministers, Ministers of State and Deputy Ministers. Council Ministers are the most powerful cabinet positions, followed by state and finally deputy ministers.

⁷States included in the analyses are: Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

Table 5.3: Predicting Central Grants to Indian States

	Model 1
	Central Grants/cap
PctGovVote	-9.194* (4.261)
PctCloseRaces	15.049* (5.166)
PctCommVote	-31.274 (34.545)
#HealthMinisters	3.205* (1.622)
#CabMinisters	-0.076 (0.638)
Lagged Mortality	-0.294* (0.030)
N	387

Estimated using OLS regression. Coefficients presented and, in parentheses, standard errors. Fixed effects coefficients omitted.

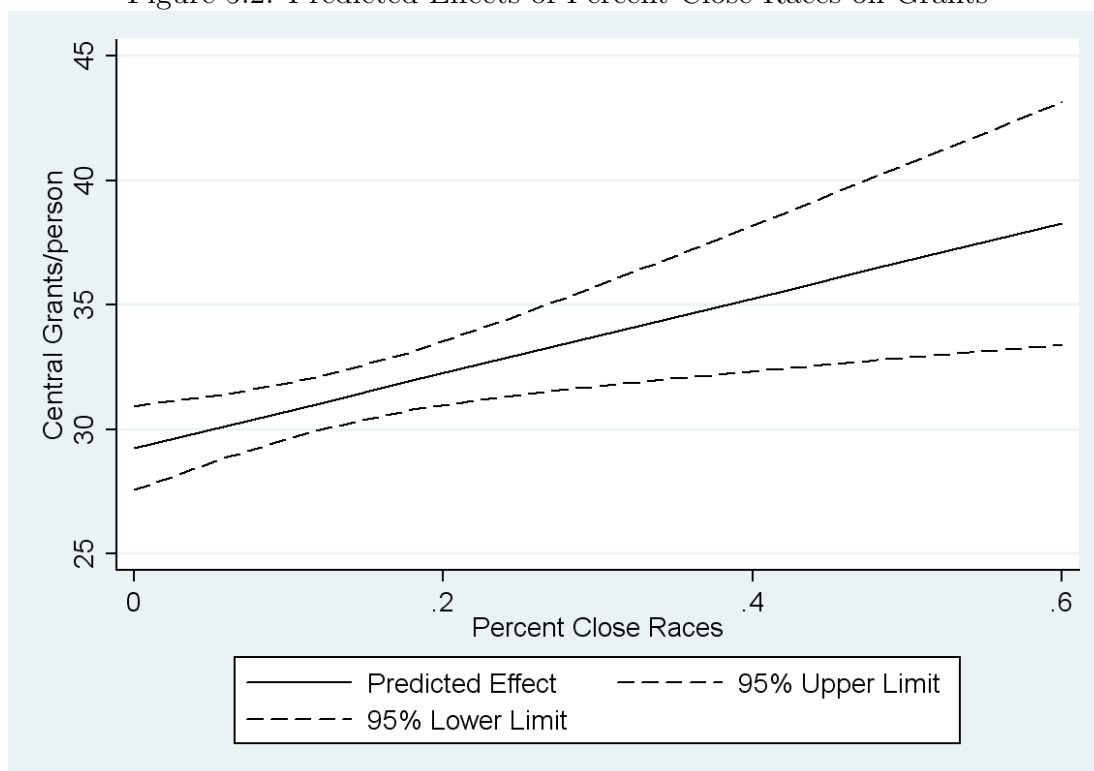
* p-value less than .05

influencing the attractiveness of states for central grants. The panel is strongly balanced with very few missing values.

As in the French case, I use a year unit of analysis despite the concerns of standard error deflation. Indian central budget decisions about the distribution of funds to states were an important yearly decision, rather than a decision made when coalitions formed or elections occurred. In addition, multiple coalitions often rose in a single electoral period in India, meaning that electoral variables are not static. Coalition reshuffles also happened frequently, altering the balance of power between Indian legislators and their individual power and ministry responsibilities.

Model 1 yields relatively mixed results with respect to the health distribution framework. Some hypotheses, including the effect of close races and presence of health ministers in a state, perform as expected. Other hypotheses, specifically the effect of left parties and

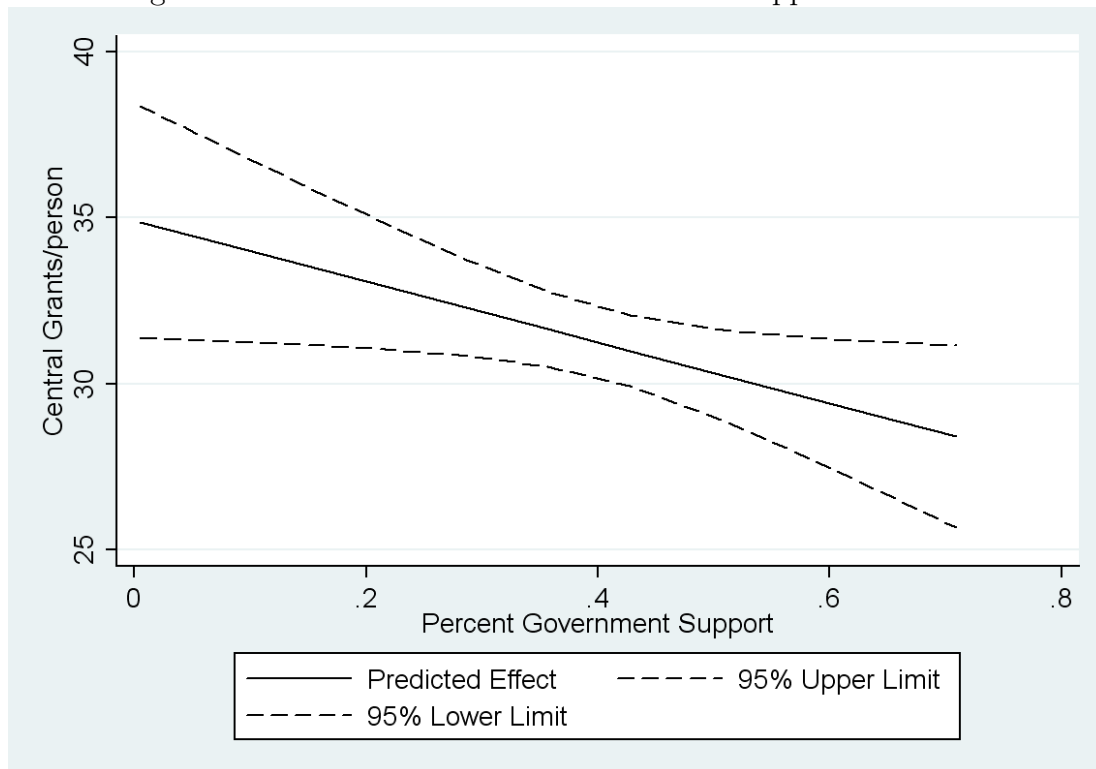
Figure 5.2: Predicted Effects of Percent Close Races on Grants



powerful legislators, give null results or, in the case of the effect of a state's support for government parties, are the opposite of my theoretical expectations.

The clearest support of my hypotheses is for competitive races. The Indian government diverted central government grants disproportionately to competitive states where close SMD races occurred that involved the government. This suggests that government parties, seeking to maximize seats, attempted to win elections by ensuring that close races tilted their way. Figure 5.2 illustrates the magnitude of the effect. A state with a quarter of its races competitive for a government party, about a standard deviation above the mean, can expect about 3.75 rupee/capita in increased grant levels compared to a completely uncompetitive state, a standard deviation below the mean value. This represents a 12.5% increase in grant money to a state compared to average grant funding levels. Indian swing voters, in states with districts much sought after by the government, received substantial additional grants.

Figure 5.3: Predicted Effects of Government Support on Grants



Measures of health expertise and specialization included in the model also generate supportive results. States with cabinet ministers, ministers of state and deputy ministers in charge of the Ministry of Health and Family Welfare gained an upper hand in central funding. In fact, having an additional member in the health ministry led to a 3.2 rupee/capita increase in central grants, a 10% increase over mean state grant levels. This is consistent with the story of health distribution, where health ministers target their own states with health improvements when in office.

The left party support and legislator power operationalizations, on the other hand, give no indication of any significant effects whatsoever. Other hypotheses, however, lead to results directly counter to my theoretical expectations. In particular, the higher the percentage of support for the government, the fewer central grants were given to a state. This effect is graphed in Figure 5.3. Hypothetically moving from a opposition stronghold, with 24% of

voters supporting the current government in the last election, to a government stronghold supporting the government at a 56% rate, leads to an approximate 3 rupee/person decrease in grants. This amounts to an almost 10% decrease in the amount spent on central grants in an otherwise average state.

There are some potential explanations of these anomalous results. To begin, the lack of an effect of left parties in India on funding is probably related to a major weakness in the dependent variable's current operationalization. My theoretical framework suggests that left parties will be bought off by other parties disproportionately using health funding, regardless of the party in power. It does not anticipate, however, that left legislators and voters necessarily receive a better distributional apportionment on aggregate from all central grants. Instead, the distributional benefits they do acquire will be far more likely to take the form of health funding for their supporters. The central grants measure is unsuitable to measure this effect. It measures all forms of central grants, not just health, to states. It does not measure the portion of those central grants given for health: the hypothesis argues that in areas with left parties a greater portion of those central grants will be on health projects rather than for other purposes. Acquiring better dependent variable data, specifically the amount of central government grants allotted to health programs, is vital before rejecting this hypothesis in India.

With respect to finding an effect of government support that is opposite of that anticipated, results may point to a need for nuance in my theoretical framework. Specifically, candidate selection institutions may play a key intervening role in the effect of government support on the pattern of distribution decisions. My theory, as it stands, makes no distinction between distribution behavior in democracies with centralized and decentralized candidate selection institutions. McGillivray (2004) points out that in Westminster systems, such as the United Kingdom and India, parties have the ultimate say in candidate selection and therefore have more control of their candidates. When parties have control of nominations, they may not be as incentivized to reward core constituents in stronghold states but can

instead focus narrowly on winning seats—parties care less whether they win their districts by a small or large margin than candidates. By contrast, candidates in decentralized systems want to maximize their own electoral chances as much as possible by rewarding their supporters, even in safe districts, since the party does not have the power to discipline them. In the other cases in this project, France and the United States, candidate selection was highly decentralized. By contrast, the major parties in India use a much more centralized selection system. The Indian National Congress, for example, features an “elaborate, hierarchical organizational structure” with a central Parliamentary board that “played decisive roles in the allocation of party nomination” (Brass 1994, 69-70). In this context, it makes sense for parties in India to shift central health resources from secure states to other areas because winning seats by larger margins does not help parties as much as candidates. Accounting for the effect of candidate selection institutions, it may be logical that Indian governments shifted resources away from the areas they gained the highest vote share.

The final effect that may be influencing results is the unaccounted for role of international health spending and NGOs. In earlier chapters, I presented empirical work evaluating the distribution of health in cases selected specifically due to the lack of influence exerted by international development and health organizations. India during the the period under study, 1971-1998, experienced international donor intervention. In fact, India received a sizable portion of the overall aid during the 1970s, about 5% of all international aid funding, tapering down to about 2% by 2000 (OECD 2011). Central grants and health outcomes may respond to international health decisions in unpredictable ways, potentially confounding the analysis of domestic politics presented here. On the other hand, the time period of the analysis falls before the massive expansion in international attention to health aid that accompanied the Millenium Development Goals in 2000 which emphasized “numerical and timebound targets related to key achievements in human development” (Deolalikar 2005). Before 2000, health aid was not a major focus for international donors. In practice, the Millenium Development Goals led to an increase in health’s portion of international aid from

2-3% in the early 1990s to a current level of about 13% for bilateral and 8% of multilateral aid spending (OECD 2011).

The negative relationship between need, measured with mortality rate, and central grants is an intriguing final result. This suggests that the central government did not seek to fill needs for high mortality districts with health grants. In fact, it engaged in a grants distribution scheme that favored states with lower mortality rates. The central government obviously did not serve to redistribute spending throughout India to high mortality, high need, states. It instead reinforced these inequalities with its spending.

Predicting Expenditure From Central Grants

Despite finding mixed results in a model testing the political determinants of central grants to states, it is still worthwhile to determine if central grants influenced state health spending and, ultimately, state health outcomes. In Model 2, I predict a new dependent variable, medical expenditure by states. This measure includes any funds provided by central government grants for health in addition to funds allocated by state governments for health. I predict the money spent on health per capita within states due to central grants, state tax revenues, state income levels and the need for health expenditures.

I argue that central grants predict higher expenditure on health within states because critical public health programs were the responsibility of the central government (Deolalikar 2005). Central grants for health are the avenue through which Indian national politicians could distribute health funds to states. A positive relationship between central grants and state medical expenditures suggests that health programs were a consistent portion of central grants. Central grant levels, and through them medical expenditures which incorporate those grants, will be higher in areas that politicians seek to target.

Other non-centrally decided factors determined the ability of a state to spend on health. I control for state capacity to pay for health programs using state tax revenue figures. States with higher tax revenues have a greater capacity to spend on health. In addition, I control

Table 5.4: Predicting Medical Expenditure in Indian States

	Model 2
	Medical Expenditure/cap
Central Grants/cap	0.134* (0.012)
State Tax Revenue/cap	-33.008 (86.201)
Domestic Product/cap	0.009* (0.001)
Lagged Mortality	-0.079* (0.012)
N	387

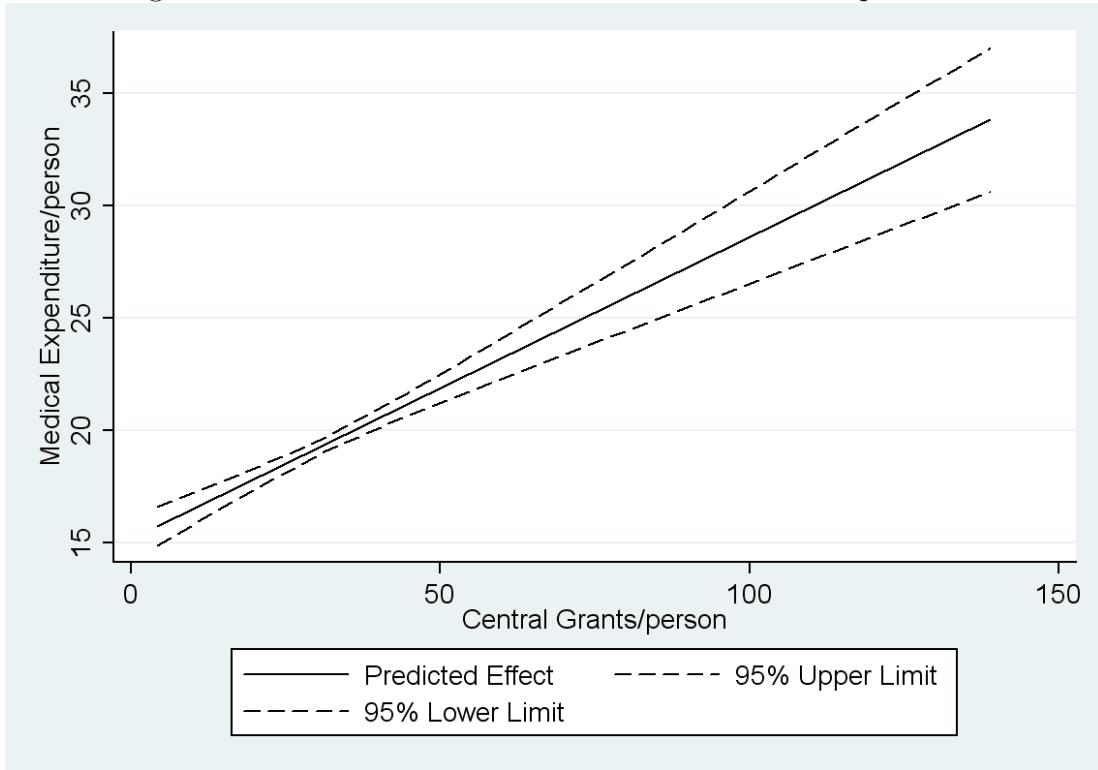
Estimated using OLS regression. Coefficients presented and, in parentheses, standard errors. Fixed effects coefficients omitted.

* p-value less than .05

for differences in state income using net state domestic product per capita. Higher income states should tend to have higher private and public spending on health because states with rich constituents have the capacity to expand their public health capabilities and spend more on health. Finally, I again simulate demand using lagged infant mortality rate. States with poor previous year health levels need more health spending in the current year. I expect there to be a positive relationship between higher mortality rates and higher public spending on health. I again use OLS with fixed effects to remove static heterogeneity between states.

The key result, that central grants are associated with higher medical spending in states, operates as expected. The substantive effect of central grants is also shown graphically in Figure 5.4. Table 5.4 predicts that an additional 8 rupees of central grants allocated to a state are associated with a 1 rupee increase in state spending on health. Furthermore, a single standard deviation increase in central grants corresponds to a predicted increase in medical expenditure of 13% with relation to average medical spending. This outcome makes concrete sense, since we know that an important portion of central grants spending is health related and incorporated into medical spending directly. Nevertheless, Model 2 confirms the

Figure 5.4: Predicted Effects of Grants on Medical Expenditure



central government's importance in directing and targeting health funding.

It is also worth noting that Model 2 also shows a counterintuitive effect of need for health on spending, just as Model 1 regarding central grants did. My theoretical expectations were that a state with high need would also spend more money on health, after controlling for its capacity to spend and the income of its population. Instead, the model predicts the opposite effect: states with a great need for health spending in fact spend less on health in the next period, even after controlling for tax revenue capacity and income levels. This seems to suggest that poor health states reinforce their poor health in the next period by spending less on state well-being. This runs directly counter to a needs based health expenditure strategy both from the central government, who we saw in Model 1 gives fewer central grants to states with poor health, and from states, who in Model 2 spend less on health per capita.

In the longer run, the politics at work in Model 2 deserve additional attention. Specifically, there is a clear opportunity to model health politics at the central and state level simultaneously. Collection of Indian state legislative election and government data is possible, as Indian electoral politics and state statistics are well documented. With a full picture of the parties in power at the state level and what state level electoral conditions looked like, health spending could be modeled as a consequence of both central government incentives, predicting central grants, and state government incentives, predicting state expenditures, simultaneously. In addition, since most of the same parties compete in state and general elections, there may be connections between distribution incentives at the central and state levels that allow research to tease out intriguing political nuance. Central governments, for example, may be more likely to give money to state governments run by their own or allied parties. Incorporating state level Indian politics into tests provides rich opportunities for future work on distribution incentives.

Infant Mortality Outcomes

The final link between health distribution by the central government and its substantive impact is to measure and predict health outcomes. If higher medical expenditure means little in terms of citizen well-being, the results presented here are less important. Health would be a distribution area, like tax rates or trade barriers, that enriches some citizens at the expense of others but has little well-being impact. If, on the other hand, health spending also directly affects how healthy state populations are, the deadly effects of politically motivated central spending effectively contrast with the potential of a needs based approach to health spending. Do politicians help determine who lives and dies in Indian states?

In order to answer this question, I test the quantitative link between states with higher medical expenditure and infant mortality rates. Infant mortality rate is often used as a measure of overall population health, since it “is regarded as a sensitive indicator of the availability, utilization and effectiveness of health care, and it is commonly used for moni-

toring and designing population and health programs” (Bhalotra 2007, 912). Mortality rate is measured in deaths within one year of birth per 1,000 live births. The infant mortality rate is high in India despite its level of development, with the average state having a rate of around 90 per 1,000. To illustrate the scope of the infant mortality problem in India, Figures 5.5 show the distribution of infant mortality over time in the sample states of Uttar Pradesh and Orissa.

I model infant mortality rate in states as a consequence of health expenditure. I expect that the higher a state’s health spending, the lower its infant mortality rate, due to improved access to medical care and better overall public health conditions. This test again uses OLS to predict mortality rates, including fixed effects for each Indian state. Infant mortality models in India, like mortality models in France and the United States, do not control for spatial dependence due to the aggregate nature of the measure. Infant mortality is caused by a wide variety of afflictions and poor health, not any specific contagious disease that spreads state to state over time. In addition, Indian states are particularly massive and any contagion effect would likely be confined to a smaller unit of analysis.

The model also controls for other potential explanations of state mortality. First, I include lagged mortality to account for time dependence. Mortality rates in a given year are highly dependent on the state of public health in that area in the previous year. In addition, I include variables describing basic economic conditions. State domestic product per capita accounts for the effect of income in lowering infant mortality. All things being equal, rich Indian states will have lower mortality due to their increased capacity to spend on private health care, provide for nutritional needs and develop more modern infrastructure. In addition, I add a measure of a state’s level of inequality, its GINI coefficient. Income inequality is thought to be an important driver of health inequality (Gakidou & King 2003). In the Indian case, morbidity and mortality occurs most often among the worst off sections of society—poor, lower caste citizens or disadvantaged ethnic groups.

The coefficients in Model 3 add support to my hypotheses about Indian state infant

Figure 5.5: Infant Mortality Dependent Variable Distribution

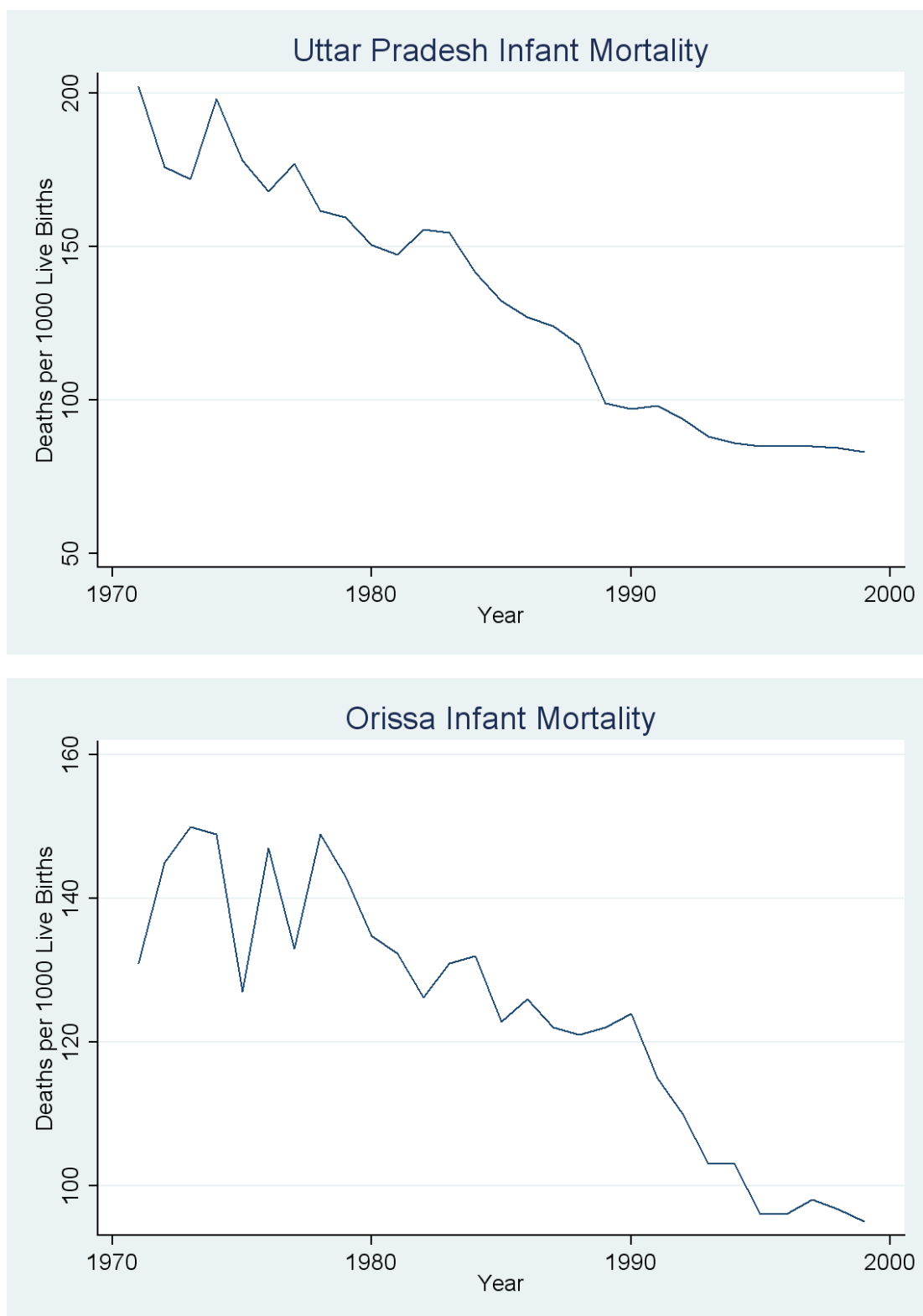


Table 5.5: Predicting Infant Mortality in Indian States

	Model 3
	Infant Mortality Rate
Medical Expenditure/cap	-0.335* (0.114)
Inequality	0.150 (0.098)
Lagged Mortality	0.763* (0.030)
Domestic Product/cap	-0.003 (0.002)
N	402

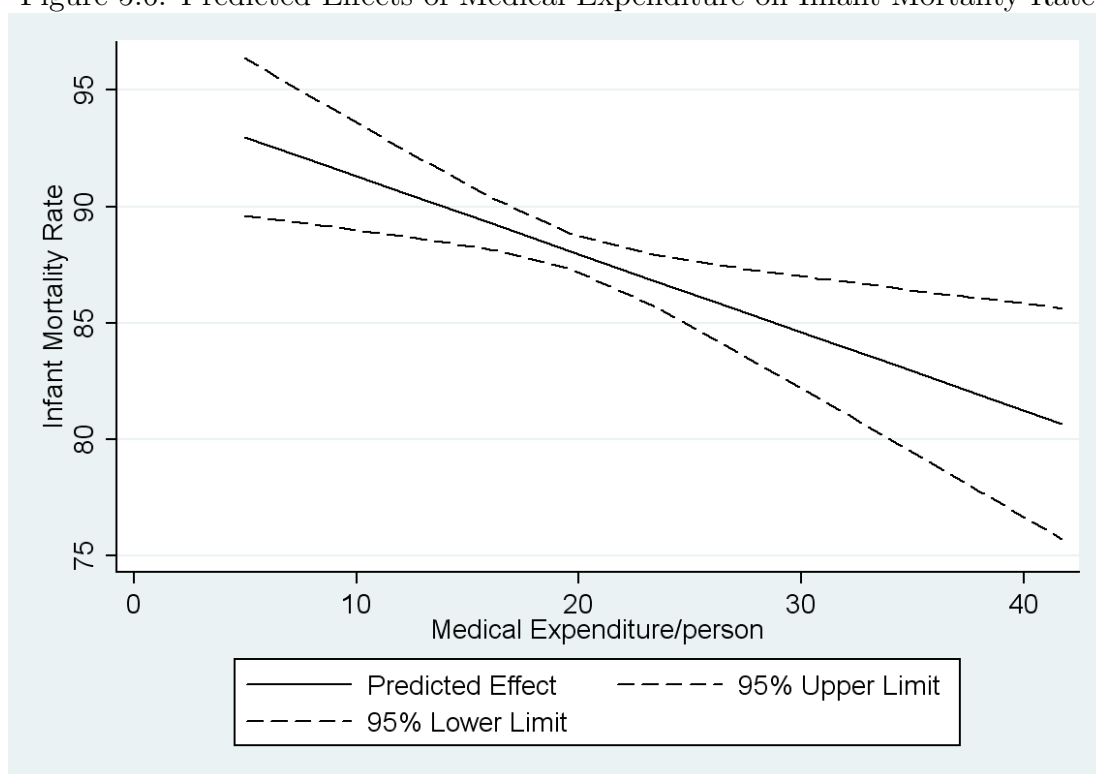
Estimated using OLS regression. Coefficients presented and, in parentheses, standard errors. Fixed effects coefficients omitted.

* p-value less than .05

mortality. Most prominently, infant mortality is responsive to medical expenditure. In fact, 3 additional rupees of spending per capita produce 1 less death per 1,000 among infants. Furthermore, a full standard deviation increase in state medical spending leads to a 3% predicted decrease in infant mortality. The impact of medical spending is shown in full in Figure 5.6 with all other variables held at their mean. The control variables, meanwhile, behave as expected. High mortality in a previous year predicts substantially higher mortality in the year following, while states with higher income per capita are associated with lower state mortality. Finally, inequality approaches conventional statistical significance, with higher inequality leading to increased mortality.

My results imply that Indian central politics affects infant mortality through central grants and then state health expenditures. We can perform very rough estimates of the effects by using drawing predictions through Models 1-3. Returning to Model 1, a standard deviation increase in the competitiveness of a particular state, a 12% increase in competitive districts, correlates with a 1.8 rupee increase in central grants. That central grant increase, taken through Model 2, predicts a .25 rupee increase in medical expenditure within states.

Figure 5.6: Predicted Effects of Medical Expenditure on Infant Mortality Rate



Finally, this corresponds to a about a .1 per 1000 decrease in infant mortality. This decrease is modest, but does give some indication that political conditions are tied to mortality outcomes. In addition, there is likely a large loss in model effectiveness due to the aggregate central grants variable, the dependent variable in Model 1. If it is primarily the health portion of central grants that predicts higher state health expenditures and lower mortality, measuring that directly may make the link between politics and health outcomes much more substantial. As it stands, health is not very sensitive to central grants spending because a large portion of central grants spending is on non-health related programs.

In order to check the robustness of Models 2 and 3, I implement a final model accounting for the endogeneity of health spending and infant mortality rates. States with major disease outbreaks and external shocks may spend more on health, all things being equal. As an alternate modeling approach to predicting mortality from medical spending with 2 separate models, I perform a two stage least squares regression. In it, I use central grants and total tax revenue as instruments for state medical expenditure. Given that medical spending is the mechanism states possess to alter infant mortality rates, I argue that grants and tax revenue determine those expenditures but are otherwise uncorrelated with infant mortality rates, meeting the exclusion restriction.

In the end, Model 4 in Table 5.6 yields substantively similar results to performing separate OLS regressions and assuming that medical spending and mortality are exogenous. Medical spending still has a significant and negative effect on mortality, while medical spending is determined by a combination of central grants and state economic conditions. One interesting result from this model is that state income per capita and inequality do not directly determine infant mortality. Instead, they alter mortality rates only through the impact they have on medical expenditure. This lends more suggestive evidence that government spending is the major driver of infant mortality in these models, rather than background state characteristics in and of themselves.

As a whole, the models presented here provide evidence that health outcomes are a

Table 5.6: Predicting Indian State Infant Mortality with Expenditure Instruments

Model 4		
	Medical Expenditure	Infant Mortality
Medical Expenditure/cap		-0.817* (0.287)
Total Tax Rev/cap	-89.501 (89.151)	
Central Grants/cap	0.134* (0.015)	
Lagged Mortality	-0.0735* (0.0123)	0.705* (0.042)
Domestic Product/cap	0.010* (0.001)	0.001 (0.003)
Inequality	-0.101* (0.044)	0.104 (0.113)
N	387	

Estimated using 2 stage least squares regression. Coefficients presented and, in parentheses, standard errors. Fixed effects coefficients omitted.

* p-value less than .05

consequence of government decisions about medical expenditure in India. State decisions on health spending directly reduce infant mortality while the amount of grants states gather from the central government helps them spend more on health. In terms of central politics, electoral competition and health specialists appear to increase the distribution of central grants to states and, as a result, alter health outcomes. The counterintuitive conclusions about government support also suggest that my theoretical framework may need additional nuance with respect to the variation in distributional incentives due to selection institutions and that a better operationalization of government distributional health policies, confined specifically on Indian central grants for health, is needed before definitively testing the theory.

Chapter 6

Politics and Health in Democracies

Results from France, the United States and India provide evidence that politicians can and do distribute health policy to meet their political needs. Tests indicate that theory derived from the literatures of legislative studies and political economy can help us model health distribution. Most critically, this distribution in turn determines the mortality rates of areas prioritized. Politicians do not treat funding health as an apolitical technical or moral issue, but instead alter its distribution according to their own needs. Evaluating the distribution framework I established, parties in government appear to reward their own voters with health improvements in systems where candidate selection is not overly centralized. They simultaneously send health resources to support public health in strategically important districts, operationalized by close races and politically pivotal party constituencies, as shown in all three democracies tested. Hard left parties in France also appear to pay special attention to health distribution countrywide, while left constituents are bought off with health. Finally, in France, the United States and India, there is also strong evidence that individual legislator characteristics like institutional power and health expertise change health distributions.

All these findings have major substantive implications for the fight against disease in 21st century modern states. Public health is a political problem as well as a technical and scientific problem. Foreign governments and international institutions must carefully consider domestic political conditions when distributing aid and expertise. Poor health does not just damage democracy, democracy also conditions health response. My results show that politicians divert public health funds to more politically salient populations. Aggregate, cross national problems of mortality and disease are, in part, a subnational political problem

of distributional politics rather than a problem only of capacity, economic development and regime type. Politics condition who lives and dies within modern democracies.

The next step is to broaden the cases studied. In particular, opening study to non-democracies is a strong possibility. Continuing with early democracies, Germany provides an intriguing case because, in many ways, it was a functionally hybrid democratic/authoritarian regime. The unelected Kaiser and Chancellor held most powers, but were under pressure and partially beholden to the legislature and the opposition SPD. Many of the health reforms granted by the German Chancellor were a result of SPD pressure or to buy off urban, non-Prussian, SPD voters. Germany would allow me to begin testing a general theory of distributive health politics, rather than a theory strictly confined to democratic distributive politics. The authoritarian selectorate in Imperial Germany, primarily Prussian *Junkers*, may have an important role to play in the domestic distribution of health in Germany. Patterns found in Germany could tell us a great deal about the health distribution incentives in modern developing hybrid regimes.

The most obvious future direction for the project is, of course, to test the hypotheses in 21st century modern developing democracies under threat of poor sanitation, TB, HIV/AIDs and poor public health more generally. While Indian results are taken from the last decades of the 20th century, they still derive from a period before the sea change in international aid toward improving health and well-being. 21st century democracies raise the question of international organizations and their role in shaping the distribution game for domestic politicians. International organizations have their own set of incentives for public health, where they focus on reducing threats to global public health rather than domestic public health, and individual donors want to reduce health threats that directly impact their populations (Steele 2011). In the context of domestic distribution, this means that most donors will focus on public health threats with the potential to spill over borders and endanger developed countries rather than threats that are the most pressing for domestic politicians. Identifying what donor priorities are and inserting them into an empirical model of domestic

spending may provide insight into the way that distributive politics and donor interests interact. With the domestic causal story developed here, it may be possible to model distribution in the modern developing world context in the future.

Another research opportunity is modeling mortality from specific causes. The type of health threat faced may condition the political incentives to distribute public resources for its control. Disaggregating mortality into different types sheds light on why some diseases persist while others are controlled. Depending on the type of threat, my theory may be able to predict when governments will treat only politically important districts and leave health threats in others and when their response will be more equitable. I plan to explore the political impact of specific diseases on spending and mortality rates. Geographically isolated malaria may, for example, generate different incentives for politicians than fast spreading, airborne influenza. Furthermore, governments face choices regarding disease control options with varying political implications—malaria, for example, can be combated with nets, spraying or wetland control. The public health strategies politicians choose to implement could be determined in part by their political implications.

Finally, the modern developed world is hardly immune to the impact of distributive politics. In health, different political processes may be at work in these countries because of the types of health problems they confront: chronic problems like heart disease and preventative medicine dominate developed country public health efforts. Industrialized world health debates, such as recent fierce political conflict over Obamacare in the United States, may be driven in part by the sort distributional politics described by my theory. Teasing out the distributional politics of health in the developed world and how it differs from the context presented here is a task worthy of future research.

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