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The Emergence of "Clean" Government in Chile**

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Political Competition, Rent-Seeking and Corruption: The Emergence of "Clean" Government in Chile

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Why does corruption persist despite the presence of democratic institutions such as competitive elections? What conditions facilitate the emergence of accountable government? This article presents a model based on the principal-agent framework that shows that level of corruption is a function, not only of the presence or absence of challengers, but also of the structure of competition to influence public policy. The model shows that when the electorate's demands are structured along more than a single dominant dimension, challengers cannot credibly commit to act differently from corrupt incumbents, and incumbents have substantial incentives and opportunities to engage in corrupt behavior. Alternatively, when the electorate's preferences are confined largely to a single dimension, challengers' promises can be credible. The credibility of challengers' commitments keeps incumbents from significantly deviating from their campaign promises and provides constituents with the means to punish corrupt incumbents. Evidence from the experience of Chile during 1891-1952 proves consistent with expectations derived from the model. Corruption was prevalent in Chile during 1891-1924 when competition to influence policy was multidimensional. Corrupt activity declined in the late 1930s when preferences over a majority of issues began to align along a single dominant dimension.

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1. Introduction

On November 4, 1993 twenty-six academic groups in Chile organized a seminar on the advantages of democracy in the fight against corruption (El Mercurio 1993, 1-2). The country had recently emerged from almost two decades of dictatorship, and the seminar was part of an effort to promote the consolidation of democracy. At the opening of the seminar, then President Patricio Aylwin informed participants that although the country had a long tradition of non-corrupt government, he saw signs of an increasing propensity for corruption among public officials and society in general. The president urged participants to determine ways to encourage and ensure high ethical standards among public officials.

This so-called tradition of non-corrupt government was not always present in Chile, however. Many contemporary observers and historians describe the country at the turn of the twentieth century as corrupt by any standard (Donoso 1942; Rivas Vicuña in Loveman 1988, 192-3; Poblete Troncoso 1920, 21-4). Why does corruption persist in some countries despite the presence of democratic institutions such as competitive elections? What factors facilitated the emergence of "clean" government in Chile?

In this article, I develop a theory based on insights from the literature on principal-agent relationships to explain variation in levels of corruption across countries and over time. I conceive of constituents as principals and politicians as their agents, and argue that when constituents' preferences are confined largely to a single dimension, they can better prevent politicians from engaging in corrupt practices. Conversely, I contend that when constituents' preferences are structured along more than a single dominant dimension, incumbents will have significant incentives and opportunities to appropriate substantial amounts of government revenues for their personal enrichment. I then examine the experience of Chile from 1891-1952 to determine whether variation in the frequency of corrupt behavior in Chile was correlated with changes in the structure of competition to influence policy.

The following section elaborates on the principal-agent theory of corruption and provides definitions for key concepts used in the paper. Section 3 provides evidence for levels of corruption in Chile from the turn of the century to the early 1950s and corresponding changes in the number of predominant dimensions of competition to influence policy through time. Section 4 provides a brief summary and discussion of implications for further research.

2. A Principal-Agent Theory of Corruption

According to the principal-agent perspective, individuals (principals) maintain agency relationships to take advantage of gains from specialization and the division of labor (Ross, 1973). In a simple agency relationship, a principal expresses a set of preferences over outcomes, and the agent accepts an obligation to act on behalf of the principal in exchange for some form of compensation. The principal's problem then becomes that of ensuring that the agent, who has interests of his own, acts on the principal's behalf. This is complicated by the fact that the agent has more information than the principal, and carefully monitoring the agent can be costly for the

principal.

Agency theory provides some insight into the problem of controlling agents. The theory suggests that inducing competition among potential agents would give the principal more control. Agency theory also holds that if the principal can credibly commit to a schedule of rewards and punishments depending on the agents' behavior, then even more control is possible.

Banfield (1975) and others (Barro 1973; Rose-Ackerman 1978; Klitgaard 1988) have applied this framework to corruption, conceiving of chief executives or legislators as principals and bureaucrats as agents. They argue that to minimize bureaucratic corruption, civil servants should be given strong incentives to implement the policies enacted by their principals as well as disincentives to engage in corrupt behavior. They suggest that principals use higher wages and merit-based promotions to motivate bureaucrats; and more effective mechanisms to monitor bureaucratic performance as well as severe punishment to discourage improper behavior.

While corruption does appear prevalent in countries with non-merit-based appointment procedures and underpaid civil servants, a puzzle remains: Why do some governments create the appropriate incentives for bureaucrats while others seemingly continue to tolerate corrupt behavior? To address this question, I conceive of citizens as principals and politicians as agents. Two implications follow from conceiving of principals as a collective body of citizens who are likely to have opposing preferences over policies. First, the principals can be induced to compete against each other for benefits over which agents control (Ferejohn 1986). Second, agents in the political realm often have the opportunity to restructure contracts unilaterally. Although citizens (or at a minimum, electors of winning candidates) are ultimately the principals of public officials, once in power, public officials can make it more difficult for their principals to punish them for official malfeasance (Moe 1990).

Considering these two features implies that the solutions to the simple agency problem of control discussed above have to be modified. In particular, the following questions arise: Under what conditions would agents/politicians be able to exploit their principals/constituents? Or, why do some countries approximate the ideal world of politicians as faithful representatives of the common weal more closely than others?

Previous works on agency problems and electoral control of politicians provide some insight into the conditions under which politicians may be prevented from exploiting their constituents. Rose-Ackerman (1978) argues, for example, that the electorate must care about universalistic policy issues rather than purely particularistic benefits, and that interest groups must oppose each other on every issue. Barro (1973) argues that there must be some mechanism other than the re-election imperative to ensure that politicians pursue the electorate's interest during their last term of office. Political parties, according to Barro, could serve as one such mechanism since party leaders would be concerned with the reputation of their organizations and would have an incentive to ensure that party members in office remain honest through the completion of their last term.

While these works provide useful insights, a number of countries continue to be plagued

with corruption despite the presence of competitive elections, political parties, and a relatively comprehensive set of interest groups. Thus, I extend this work on agency problems and corruption by considering a different political factor underlying citizens' ability to punish venal politicians: the structure of citizens' aggregated preferences (Ferejohn 1993; Riker 1986). I argue that when competition to influence policy is structured mainly along a single dimension, constituents can better control their representatives and deter them from engaging in corrupt behavior. Conversely, when citizens' preferences are aggregated such that they cut across, rather than reinforce each other, then politicians have the incentive and opportunity to engage in corrupt activity.

A dimension of competition is the structure of an electorate's preferences over one or more issues as aggregated and expressed through politicians and parties. Competition to influence policy is *perfectly unidimensional* when the electorate cares only about one issue, or when citizens' preferences over all issues are perfectly correlated with each other such that each citizen's preference on any issue can be used as a predictor for his preferences on all other policy issues. Competition to influence policy occurs along a *single dominant dimension* when voters' preferences over one issue can be used as predictors for their voting behavior with respect to a majority of issues. Competition to influence public policy is *multidimensional* when voters' preferences over different issues are uncorrelated with each other at the aggregate level such that knowledge of an individual's preferences over any issue provides little insight into her voting behavior with respect to other issues.

The concept of dimension used in this article is distinct from the concept "dimensions of cleavage" used by sociologists such as Seymour Martin Lipset and Stein Rokkan (1967). Cleavage dimensions, according to Lipset and Rokkan, denote strains and oppositions derived from social structures, in particular, oppositions based on territorial differences as well as economic, social and religious divisions. As I define it, a dimension of competition is the political expression of an electorate's aggregate preferences over one or more issues. Thus, my conception is more akin to Lipset and Rokkan's concept of constellations of political parties, which they define as the *political expression of societal cleavages*.

My conception of dimension is also distinct from that in works by Kenneth Shepsle and Barry Weingast (1981). They view dimensions as the underlying structures of preferences over specific policies rather than the structure of aggregate demands. Societies are generally composed of individuals with heterogeneous preferences over different policies; hence, the underlying structure of preferences in most societies is likely to be multidimensional. In some cases, however, individuals may have strong preferences over only one or two policies, or institutional arrangements might constrain their ability to express their preferences, such that the behavioral expression of aggregate preferences might occur along a single dominant dimension. In this study, I do not directly address the issue of why preferences are translated into competition along one or more dominant dimensions, rather I focus on the consequences of the structure of competition for accountability of politicians.

I start with a numerical example of a model by Ferejohn (1986) which depicts voters as competing to influence policy in a multidimensional space (See Figure 1.). The example shows

that an incumbent will have the opportunity to keep much of government revenues for himself despite democratic institutions such as elections. The figure represents a democratic system with an incumbent politician (I) and three voters (V1, V2, V3). The incumbent politician holds an office, and his task is to implement policies that may result in different levels of benefits for each voter. To maintain power, the incumbent needs support from a simple majority, i.e., two out of three voters. Each voter must choose a voting rule--a threshold of benefits that he expects in exchange for supporting the incumbent. The fractions below each voter represent the proportion of government revenues or social product that each voter demands, while those below the incumbent represent his "take," i.e., that part of domestic product that he keeps for his personal enrichment. In effect, one minus the sum of voters' demands is equal to the absolute amount of corruption in the system.

(Figure 1 about here)

In figure 1, voters' demands are set such that they depict a multidimensional structure of competition to influence policy. Multidimensional competition in this case implies that there are three possible majority coalitions given three voters: (V1) and (V2); (V2) and (V3); (V1) and (V3). Conversely, if voters demands were to be depicted as aligning along a single dimension, only two coalitions would be possible. Assuming that (V1) and (V3)'s demands could be characterized as the endpoints of a single dimension, and (V2)'s demands, the center; then the only likely coalitions would be between (V1) and (V2) and between (V2) and (V3) in a unidimensional system.

Voters' demands at time (t) are set at 1/3 of government revenues each, while the incumbent receives nothing. This is a non-corrupt outcome. The amount of 1/3 is set arbitrarily, but the equilibrium outcome that I discuss below will emerge regardless of the initial distribution of demands. Assuming that the incumbent's goal is to maximize wealth over a lifetime, and public office is one means to that goal, the model implies that the incumbent will have the incentive to start a "bidding game" between voters. In effect, the incumbent will have the incentive to propose to implement policies that will benefit only two out of three voters, thus keeping the rest of the revenues for himself. As Figure 1 shows, at time (t+1) the incumbent proposes policies that will benefit (V1) and (V2). (V3) receives nothing, and the incumbent keeps 1/3 of government revenues for himself.

If we move on to time (t+2), we can imagine that (V3), not wanting to be left out and receive nothing once again, will have the incentive to lower his demands. And the incumbent will have the incentive to propose policies that will benefit (V3) and either one of the other two voters. Figure 1 shows that (V3)'s demands are lowered from 1/3 to 1/6 of the benefits available. The incumbent implements policies that benefit (V2) and (V3), and keeps a larger part of government revenues for himself. Moving on to time (t+3), we can imagine a similar dynamic. Not wanting to be left out and receive nothing once again, (V1) will have the incentive to lower his demands. And this time the incumbent implements policies that benefit (V1) and (V3), and he keeps an even larger part of government revenues.

In sum, not wanting to be left out and receive nothing, each voter will have the incentive

to lower his demands in order to be part of the "least costly" majority. Ironically, the model implies that in their desire to be part of the "in" group, voters will lower their demands such that the incumbent will find the price of support close to nothing. This dynamic is captured by the statement of a Thai farmer: "After the elections, we never see the MPs again anyway. So why not take the money while it's there?" The farmer had exchanged his vote for bus fare to his home town. The Member of Parliament (MP) that he voted for had been exposed for corruption not long before the election (Far Eastern Economic Review 1992, 30).

If citizens receive few benefits from the incumbent's policies, then why do they not simply "vote the rascals out"? The model implies that incumbents will often remain in office despite their malfeasance because challengers are unable credibly to commit to act differently once in power. Although a challenger can always propose a set of policies that will make a majority of citizens better off, given the structure of incentives facing incumbents in a multidimensional arena, potential supporters will expect a challenger to renege on his promises and to maximize his own wealth once in power. Thus, citizens will have less incentive to replace the incumbent, and any turnover among incumbents will likely be a function of idiosyncratic characteristics of particular candidates.¹

The question remains: How does competition along a single dimension minimize corruption? Figure 2 illustrates how unidimensional competition makes the exchange of policies for votes, rather than bribes, self-enforcing. Voters' preferences over all issues are assumed to be distributed along a single dimension (x-axis) with the point (M) representing the median voter's ideal position. The amount of corrupt gains secured by incumbents is represented along the y-axis. The median voter's preferences over alternatives are captured by the indifference curves around (M). All points on any specific indifference curve are equally acceptable to the median voter. All points on indifference curves closer to (M) are preferred to points on indifference curves further from (M). The figure shows, for example, that the median voter would always prefer the point (M) to the point (a) or (b). But he would be indifferent between the point (a), a position rather distant from his ideal policy point but one that implies no corrupt gains to the incumbent; and the point (b), a position representing his ideal policy choice but an outcome that allows some corrupt gains to the incumbent.

(Figure 2 about here)

The model implies that an incumbent can attempt to pick a policy position that will allow him to keep a part of policy-induced rents for himself, such as the point (b). Unlike the

¹ It should be noted that the inability of challengers credibly to commit to adopt particular positions does not rule out their winning office because the promises of incumbents are equally non-credible. Indeed, a model with many viable candidates would have no equilibrium outcome in terms of tenure and amount extracted by incumbents. Based on such a model, one can only specify that in majoritarian systems, politicians once in power will have the incentive and opportunity to keep at least 50% of the resources they control whether that be government revenues or potential policy-induced rents.

multidimensional model, however, this one implies that campaign promises of challengers are self-enforcing. A challenger can propose to implement policies represented by the point (M), for example, and (M) being the median voter's ideal position, he would win office. Moreover, he would have the incentive to implement his campaign promises because in this unidimensional arena, (M) is the only policy position that would generate a decisive majority. Constituents may have different perceptions as to how well an incumbent may have fulfilled his promises, but the message to incumbents would be clear. They would be punished if a sufficient number of constituents perceived that they had significantly deviated from their policy promises or engaged in corrupt practices, otherwise they would be re-elected. Conversely, majority of the electorate would have no incentive to turn to challengers so long as incumbents implemented policies associated with the median voter position and refrained from corrupt behavior.

The model depicted above presents a simple view of politics. It assumes that only individual citizens compete to influence policy, and that each citizen is equally important for the incumbent's survival. In practice, incumbents are also subject to demands from special interest groups, and these groups may vary in their importance to incumbents' survival. I argue, however, that so long as no single interest group can guarantee incumbents' re-election, and interest groups' demands are structured along more than a single dimension, incumbents will have the incentive and opportunity to engage in corrupt activity as depicted in the model above.

In sum, when competition to influence policy occurs along a single dominant dimension, challengers can make credible promises, and consequently, they pose credible threats to incumbents. The credibility of challengers' promises, in turn, keeps incumbents from making significant policy deviations that sell out particular constituents. Conversely, when competition is roughly unidimensional, a critical number of constituents are freed from the need to bid down or trade-off their demands in order to be part of the winning coalition, and they can better focus on the agency problem of minimizing corruption among incumbents.

Below, I discuss definitions and operationalization of the two key concepts used in the paper: corruption and the structure of competition to influence policy. The utility of the principal-agent theory of corruption is then illustrated by examining the Chilean case from 1891-1952.

Defining and Measuring Corruption

I define corruption as the performance of services typically required of public office-holders in exchange for monetary rewards over and above the amount formally stipulated between officials and citizens *ex ante*. Services, in this case, refer to all processes associated with the enactment and implementation of legislation. This definition is based on Nye's concept of corruption--the use of public office for personal enrichment (Nye 1967).

For example, economic analyses suggest that monopolies reap extra-normal profits because of their ability to set prices. Politicians' acceptance of a part of these profits in exchange for legislation creating these monopolies would be considered corrupt behavior in this study.

The creation of monopolies in itself, however, is not considered corruption if all profits are redistributed by politicians to constituents. By this definition, the enactment of laws that favor certain constituents in exchange for *votes*, or the exchange of cash for votes, is not considered corruption unless politicians enrich themselves in the process. The provision of these benefits in exchange for votes is considered a "normal" aspect of the political process. On the other hand, the provision of benefits in exchange for *cash* is considered corruption, if the funds are used solely for operating and campaign expenses that do not provide tangible benefits to constituents.

This definition stems from the principal-agent framework. The framework implies that at a minimum, given the heterogeneous and often opposing preferences of citizens, politicians are elected to act on behalf of their political supporters. The agreement between politicians and supporters does not necessarily specify the nature of benefits to be distributed. Thus, enactment of laws that favor supporters, including "pork barrel" legislation or the exchange of cash for support, can be conceived of as two types of benefits that supporters may receive. On the other hand, the agreement between politicians and supporters specifies *ex ante* the type of compensation that politicians will receive in exchange for their services. Thus, politicians' enactment of legislation in exchange for financial rewards above their legal compensation would be corruption.

The clandestine nature of corruption makes it impossible fully to observe and to measure. Thus, I use an indirect measure of corruption: policy-induced rents. Policy-induced rents are profits generated by policies that create barriers to entry in particular industrial sectors. Entry barriers limit the number of firms competing in a particular sector, allowing existing firms to earn extra-normal profits (Gallagher 1991; Krueger 1974). I assume that if elected officials are to engage in corrupt behavior, they would most likely (1) pass laws benefitting their own business concerns; (2) expect bribes from potential rent beneficiaries in exchange for rent-inducing policies; or (3) expect bribes in exchange for their influence over bureaucrats who implement rent-inducing policies.

Admittedly, two problems plague the use of policy-induced rents as a measure of corruption. First, only benefits received by elected officials in exchange for rent-inducing policies are considered corruption in this study, but measures of rents capture benefits to both rent-seekers and politicians. Secondly, data needed to measure rents in whole economies tend to be highly aggregated. This makes it difficult to distinguish between "transfers" or bribes, and wasted resources or dead weight losses induced by particular policies. To compensate for these measurement problems, I also consider the number of individuals that expect to benefit from the policy-induced rents. The fewer individuals expecting to benefit from particular policies, the more difficult it will be to influence policy solely on vote share, and the more likely it will be that rent-seekers engage in corrupt behavior. Conversely, if the value of bribes to elected officials is greater than the expected costs in terms of losing votes and office, then competition for policy-induced rents is likely to result in corruption.

Defining and Measuring Dimensions of Competition

The structure of competition to influence policy is a function of individuals' preferences over different issues and the political institutions that channel those preferences. A common method for determining the number of dimensions of competition would be through analyses of party platforms (Budge, Robertson and Hearl 1987). Since political parties are the main vehicles for the aggregation of preferences over different issues in democratic settings, party platforms should reflect the interests of politically relevant groups in society. A group is politically relevant if it has resources valuable to politicians in their goal to maintain power. Such resources include votes, campaign funds, and even time donated to help in campaigns.

Party platforms are useful indicators of competition between social forces only if they correspond to actual behavior of politicians, parties, and the electorate. Indeed, party platforms are often no more than platitudes or wish lists. Votes in the legislature are less prone to this problem and are, therefore, better indicators for the structure of articulated interests. Legislation is more likely to embody the issues most salient to the electorate, or at least that fraction of the electorate that is competing to influence public policy. Furthermore, votes on legislation represent actual behavior of politicians upon which voters can condition their behavior. While individuals may not be interested in every vote in the legislature, I assume that they evaluate incumbents based on their actual behavior. The significance that incumbents themselves place on nominal voting--as opposed to other voting rules that do not expose individual records--belies their concern over some of their constituents' evaluation.

Assuming that each legislator represents the interests of some number of politically active groups, one indicator of multidimensional competition to influence policy is the shifting of coalitions in the legislature on various bills. The formation of a different coalition for every bill would make it difficult to predict how each legislator would vote on one issue based on his votes on other issues. This would suggest that constituents' preferences over one issue do not necessarily covary with their preferences over other issues. In effect, if the structure of articulated interests is multidimensional, we would expect to see legislators often dissenting from their parties' positions.

In this study, I use two methods to determine whether legislators were significantly cross-pressured. First, I use party cohesion scores or the average percentage of legislators from the same party that votes together on all divisive bills. A bill was considered divisive if at least 10% of deputies present opposed the majority opinion. Cohesion scores close to 100% evince strong party discipline and legislators that are not cross-pressured. In a two-party system, high cohesion scores suggest that parties are competing along a single party-defined dimension. In a multiparty system, high cohesion scores suggest a party-defined structure of competition, but not necessarily a unidimensional one. Parties may be highly disciplined but may still be competing with each other along more than one salient dimension.

Thus, I also use principal-component analyses to determine whether legislative votes were intercorrelated with each other.² Using legislators' votes on bills as input, principal-

² For a different technique used to analyze votes in the U.S. Congress, see Poole and Rosenthal (1991).

component analysis helps identify possible structures underlying votes on different bills. If a majority of votes on bills are correlated with each other, this would indicate one salient dimension. If correlated votes cluster in different groups, this suggests that politicians experienced cross-cutting pressures. The number of clusters would indicate the number of dimensions in each particular congressional session. The algebra used in principal component analysis invariably biases the outcome toward a first dimension with a large number of bills (Stevens 1992, 374-407). To compensate for this bias, emphasis is placed on comparisons through time rather than conclusions based on any single congress.

3. Corruption and the Structure of Competition in Chile, 1891-1952

In this section, I examine whether changes in the level of corruption in Chile were correlated with changes in the structure of competition to influence policy as the principal-agent theory discussed above would predict. I begin my investigation in 1891, when a new political regime referred to as the parliamentary republic was installed. The new regime was the result of a short civil war between the incumbent president, Jose Manuel Balmaceda, who was backed by most of the army, and his opponents in Congress, who were backed by the navy. The civil war ended in victory for the congressional forces, who then adopted a constitution that significantly weakened the presidency. The parliamentary republic lasted until 1924, when the military stepped into power (Ramirez Necochea 1969; Montéon 1982).

I start my investigation with the parliamentary republic because contemporary observers and historians alike considered the period fraught with corruption. During this period, politically influential families often intervened in bureaucratic affairs on behalf of their private concerns. This feature of Chilean politics is captured in the statement of a prominent businessman to a high-level bureaucrat who was attempting to streamline and increase productivity in his department:

Every Chilean public office is given in return for service of more or less importance to men of influence. With your system [of merit], you would destroy the national traditions. You must not forget that not all foreign customs can be adapted for our use...In our land, one cannot cultivate puritanism; it is an exotic plant, unsuitable here (Pinochet Le-Brun in Montéon 1982, 132).³

Using public office to build economic empires was also commonplace during the parliamentary republic. As one US minister to Chile noted:

All the political parties are rent by internal dissensions, and such government, as the various parties are able to give the country, is the result of intrigues, having for their object, the furtherance of the selfish interests of various little cliques which dominate their councils. There is no such thing as a distinct political

³ Tancredo Pinochet Le-Brun, cited in Montéon (fn. 32), 132.

program... The power and opportunity to control public patronage, or secure individual profit, seems to be the decisive factor [in politics] (Poblete Troncoso 1920, 23).

This view was corroborated by Abraham König, an historian, who noted that congressmen bought votes "...not to serve their party or country, but...to take advantage of their situation to prosper and do business." (Valenzuela 1977, 195).

Many politicians who did not themselves own large enterprises worked concurrently as private counsel for the largest domestic and foreign firms in the country. They were often accused of putting their firms' as well as their own private interests before the public good. It was not uncommon to see advertisements in newspapers that read: "Looking for a partner to establish a first-class business, preferably Senator of the Republic." (Keller R. 1931, 158). The intercession of elected officials appeared to be necessary if a firm wished to obtain protection from foreign and domestic competition through tariffs and tax exemptions.

Thus, anecdotal evidence suggests that corruption was endemic in Chile during the parliamentary republic from 1891-1924. Did economic policies in Chile actually provide incentives and opportunities for corrupt behavior? Were there substantial policy-induced rents to be obtained? And were rents captured by a small number of enterprise owners such that it was in their interest to bribe politicians in exchange for rent-inducing policies?

One of the most likely sources of rents in any economy is tariff legislation, and work on economic policy in Chile suggests that tariffs were the major source of rents during the parliamentary republic. Debates on tariffs were held in Congress as early as 1887, but tariff legislation was first seriously considered only in 1897 (Chile, Camara de Diputados 1897, 627-28). In December of that year, the first general piece of tariff legislation, Law 980, was passed. The act imposed *ad valorem* taxes of 60% on 59 agricultural and manufactured goods, such as grains, clothing, and light metal goods. It also imposed a 35% tax on intermediate goods, such as textile and leather products. Raw materials and machinery were to be taxed at rates from zero to 15%. Specific taxes, most set at rates higher than the *ad valorem* 60%, were imposed on 28 products, including cattle, sugar, alcohol, and tobacco products (Palma 1976, 279-80; Anguita 1913, 400-07). A 25% standard tariff was set for all products otherwise unclassified. Revisions of Law 980, which for the most part increased protection for the manufacturing sector, were adopted in 1916, 1921, 1925 and 1928 (Kirsch 1977, 133).

Students of the Chilean economy differ in their assessment of the impact of this tariff legislation. Some (Véliz 1971; Montéon 1982) suggest that tariffs were ineffective. They argue that a "free trade" coalition of merchant-bankers and mining and agricultural exporters dominated the period before 1930, making it difficult for Chilean-owned industries to prosper. Others (Mamalakis 1976; Kirsch 1977) point out that the period under the parliamentary republic was one of increasing protectionism through tariffs with a relatively clear goal of industrialization. This divergence in interpretation may stem from a difference in views regarding how much protection is adequate to spur industrialization and how quickly a country should industrialize. Whether or not tariffs were adequate--or whether they were even

beneficial--for the economic development of Chile is not important for the purposes of this study. What matters is that the measures that were implemented created substantial rents.

Table 1 provides a breakdown of rents from tariff protection during 1912-1923 and 1941-1952.⁴ Rents induced by tariffs were measured using a formula from Gallagher (1991, 89-90):

$$\frac{(\text{Total Tariff Revenues/Total Value of Imports})}{* (\text{Value Added of the Manufacturing Sector})}$$

As the table indicates, rents from 1912-1923 ranged from 32.37-104.11 million pesos and averaged 52.25 million pesos per year.

(Table 1 about here)

The high amount of rents does suggest that all firms protected by tariffs benefitted considerably, but individual firm owners are likely to bribe politicians only if they expect rents to accrue specifically to themselves and their firms. Data from a study on Chilean industrialization from 1880-1930 show that the benefits of tariffs in the first quarter of the twentieth century were highly concentrated at the firm level. Monopolistic conditions obtained in many industrial sectors. Eleven out of 13 protected sectors were highly concentrated, meaning that a single firm owned over 50% of total assets (Kirsch 1977, 115-16). Thus, tariff legislation targeting specific products created rents for particular firms.

Furthermore, aggregate figures on returns to capital suggest that benefits from tariffs accrued to firm owners rather than to workers. The average annual rate of return to capital in the industrial sector was a relatively high 29.8% from 1912-1923 (See Table 1). Given the high level of industry concentration in Chile, the high rates of return to capital mean that benefits accrued to a relatively small number of families who owned or controlled many of the country's largest firms. Fifteen percent of directors of the 40 largest firms in the manufacturing sector sat on boards of directors of two or more firms, and 77% of the directors of manufacturing enterprises traded on the Santiago stock exchange were on boards of private corporations in other sectors, such as the agricultural or mining sectors (Kirsch 1977, 73-4). Moreover, studies on labor conditions suggest that urban workers experienced drastic declines in real wages in the first two decades of the century and only gradually recovered ground in the 1920s after violent strike movements (DeShazo 1983, 33-5). Thus, the presence of monopolistic conditions during the parliamentary republic provided substantial incentives for individual enterprise owners to bribe politicians.

In 1924, the military presented then President Arturo Alessandri with a list of petitions which included a package of relatively progressive labor legislation and a bill increasing military

⁴ No deflator was readily available for years prior to 1924, but cost-of-living indices suggest that prices were relatively stable until the early 1930s (Fetter 1931, 141-42; Ellsworth 1945, 33-48).

expenditures. At the invitation of Alessandri, the military stepped in to pressure the legislature into passing these bills (Scully 1992, 83-4; Loveman 1988, 217-18). Passage of the president's bills was also helped along by workers' strikes (DeShazo 1983, 211-18). It was not long, however, before disagreement between progressive groups and the military, and conflict within the military itself, led Alessandri to resign and leave the country. After a brief attempt to restore democracy (or at least the trappings of democracy), a group of officers headed by Carlos Ibañez and Marmaduke Grove seized the government. Ibañez ruled as dictator until 1931 when the Chilean economy plunged into a depression, and he stepped down from power. The military then engaged in a series of attempts to constitute a viable regime, including the 100-day Chilean "Socialist Republic." (Loveman 1988, 218-27). Democracy was ultimately restored in 1932, albeit under a new constitution, and Alessandri was re-elected as president. The new constitution provided for a stronger president, returning to the presidency many of the powers it had lost during the parliamentary republic.

In the area of economic policy, the government implemented increasingly protectionist tariff legislation in the second quarter of the twentieth century, and aggregate rents in the economy increased substantially. Tariff rents from 1941-1952 were almost six times higher than rents in a similar twelve-year period from 1912-1923. Tariff rents ranged from 182.27-445.45 million pesos in the period from 1941-1952 and averaged 309.70 million pesos per year (See Table 1).⁵

In addition to tariffs, the government used two new policy instruments to promote industrialization after 1924 that also created substantial rents. The first--a comprehensive system of multiple exchange rates--protected domestic manufacturers of consumer goods from foreign competition. In particular, a range of exchange rates was specified, and firms were allowed to buy foreign exchange at the different rates depending on the class of imports they intended to purchase. The lowest rates, the official and export draft rates, were set aside for the government and firms in need of raw materials and capital imports. Firms that wanted to purchase "luxury" imports did so at "gold" or "d.p." rates (Ellsworth 1945, 49-58).⁶

This multiple exchange rate system led effectively to the rationing of foreign currency and a black market exchange rate emerged for those with no access to currency at the lower controlled rates. The ratios of black market to official rates (BMER/OER) from 1941-1952 are presented in Table 1. A ratio significantly higher than one indicates that foreign exchange at the lower controlled rates was scarce, and many importers were forced to buy their foreign currency on the black market. The ratios are also indicators of the subsidy provided to recipients of foreign exchange at the lower official rates. Higher ratios denote larger subsidies to those who received foreign exchange at the lower rates, and accordingly, they signify increased incentives for firm owners to lobby (and/or bribe) officials who controlled the allocation of foreign

⁵ Trade rents from 1944-1952 were deflated using wholesale price indices for industrial products (Chile, Oficina Central de Estadística, various years).

⁶ D.P. are "disponibilidades propias" or free funds.

currency.

Table 1 shows that the difference in black market and official rates for foreign exchange was relatively small from 1941-1946, suggesting that exchange controls produced relatively few incentives to engage in corrupt behavior in the early 1940s. Pesos at the black market rate for the period from 1941-1946 cost only 20%-30% more than those purchased at the official rate. After 1946, however, subsidies to recipients of foreign exchange at official rates increased significantly. Firms that did not receive foreign currency at the official rate had to purchase their dollars at twice the official rate. The increased differential between black market and official exchange rates after 1946 suggests an increase in incentives for corrupt behavior from the mid-1940s.

The second rent-inducing instrument used by the government to promote industrialization was credit policy. In particular, the government provided low-cost loans, or guarantees for low-cost loans from foreign banks, to Chilean firms through the Development Corporation (CORFO), an agency created in 1939 (Mamalakis 1976, 293-314). Provision of these subsidized loans and loan guarantees resulted in negative average real interest rates. Negative real interest rates generally imply subsidies to credit recipients as they indicate that the nominal rates of interest charged (i.e., the price of loans) are lower than the rate of inflation. Table 1 shows that real interest rates were substantially negative for all but one year during 1941-1952. This implies that credit recipients received loans at highly generous terms. These highly negative real interest rates imply substantial incentives for corrupt behavior.

In sum, trade, exchange control, and credit policies as well as the corresponding expansion in rents after 1924 might lead one to believe that the level of corruption in Chile increased in the second quarter of the century. But consideration of the number of individuals who benefitted from rents suggests that corruption actually declined from the early 1940s. In practice, industrialists had to share the benefits of rent-inducing legislation with labor. Annual rates of return to capital in the industrial sector, which averaged of 29.8% during 1912-1923, dropped to an average of 13% during 1941-1952. Moreover, real wages for both laborers and salaried employees in the manufacturing sector increased steadily after 1940 (See Table 1). Although lower rates of return to capital and increasing real wages can be due to other factors, studies on the labor market in Chile reinforce the notion that labor received a larger proportion of the social product in the 1940s than during the parliamentary republic (Mamalakis 1965). As mentioned earlier, widespread distribution of the benefits of policy-induced rents indicates a higher likelihood that votes, rather than bribes, will be used to influence policy. Based on the ratio of rent beneficiaries to benefits, Chile's so-called tradition of non-corrupt government appears to have begun in the 1940s when benefits from policy-induced rents were more widely distributed. This finding is consistent with accounts of the probity of Chilean officials in the second quarter century. As one U.S. ambassador to Santiago noted in 1940, "Extremist elements are taking every opportunity to embarrass the Government by attempting to find scandals wherever possible, but have *not* succeeded to any great extent up to now." [emphasis added] (U.S. Consular Despatch no. 798 1940).

Why did corruption in Chile decline? Did the structure of competition to influence

policy change over time? The following section examines the structure of articulated interests in Chile during the first half of the twentieth century to determine whether the decline in corruption was correlated with the alignment of citizens' preferences over different issues onto a single dominant dimension. At the turn of the century, the political landscape in Chile consisted of two relatively large parties (the Conservative and Radical Parties), two smaller parties (the Democratic and National Parties), and an agglomeration of liberal factions dominated by the Liberal and Liberal Democratic Parties. Were these political parties competing in a multidimensional arena? Or did competition to influence policy over different issues align onto a single dominant dimension?

Comprehensive historical treatments and congressional records suggest that Chilean politics at the turn of the century revolved around at least four highly salient policy issues. In particular, many writings point to the controversy over the *separation of church and state* as a crucial cleavage in Chilean politics from the 1850s to the early part of the twentieth century. They suggest that three parties, the Conservative, Liberal and Radical Parties, emerged between 1857 and 1863 to mobilize public opinion in the conflict over state-church relations (Scully 1992, 31-43). Regalists, most of which were from the Radical Party, argued that the state had royal prerogatives over the church. Ultramontanists, primarily from the Conservative Party, argued that the state derived its powers from the church. And members of other parties shifted their views depending on the exigencies of maintaining power. Policies regarding the church's control over education, health services, and the supervision of family law, as well as budget allocation for the clergy were salient throughout the period of the parliamentary republic (1891-1924) (See, for example, Chile, Camara de Diputados 1897, 719-45; 1899, 818-1008).

A second issue that pervaded policy debates during the parliamentary republic was *economic protectionism*. The key protagonists on one side of the issue were large landowners and industrialists. Landowners lobbied for subsidies and tariff protection against the more efficient wheat and cattle industries of Argentina. "Chileanization" of the economy was one of the principal slogans of the *Sociedad Nacional de Agricultura* (SNA), the peak association of large landowners. Landowners' interests coincided somewhat with those of industrialists. Many families owned both agricultural and industrial concerns. The association that later became the main voice of industrialists, the *Sociedad de Fomento Fabril* (SOFOFA) was actually founded by members of the SNA (Loveman 1988, 173). The SOFOFA advocated tariff protection for a large number of manufactured goods. Although tariffs on some goods, such as agricultural equipment, would hurt landowners, many manufacturing industries involved the elaboration of agricultural products. Thus, both landowners and industrialists could agree on the need to impose tariffs on manufactured goods based on domestic agricultural products (Loveman 1988, 197).

Mining and commercial interests, as well as labor, opposed landowners and industrialists on the issue of protectionism. Nitrate producers were against tariffs because they recognized that protectionist policies would increase food and equipment prices, increasing their production costs and lowering their profits. Labor was against duties on agricultural goods because they also anticipated the rise in food prices (Wright 1973). Merchants anticipated a decline in profits because they believed duties would lead to higher prices and a decline in the demand for

imports. Anti-protectionist groups formed many organizations in their effort to counter protectionist forces. In 1905, meat merchants and representatives of labor established an organization, the *Comité Central de Abolicion del Impuesto al Ganado*, to lobby against a cattle tax. In addition, labor expressed its opposition to the cattle tax through strikes and demonstrations. In 1905, one such protest degenerated into two days of violence and the death of hundreds of people (Wright 1973, 250; 1982, 33-4).

The third issue that was hotly debated inside and outside of the legislature was *monetary policy*, and in particular, the problem of inflation and conversion to the gold standard (See, for example, Chile, Camara de Diputados 1897, 453-94; 1898, 317-533). A number of conversion laws were drafted, but in general, they called for conversion at a rate that would revalue the peso and restrict banks' issuance of notes (Fetter 1931). Key protagonists on these monetary issues were commercial, manufacturing and mining interests as well as labor organizations, all of whom tended to be for conversion (*oreros*), and the government, landowners in the south and small Chilean banks, who tended to be opposed (*papeleros*). *Oreros* argued that conversion would stabilize the currency and increase the foreign and domestic credit supply within the country (Drake 1989, 85). Industrialists, in particular, were for conversion because depreciation of the peso fueled labor discontent and limited their ability to buy imported capital goods and raw materials. *Papeleros*, on the other hand, opposed conversion for the restriction on credit it would impose. The government, which was dependent on export taxes for revenues, wanted to maintain its power to print currency whenever exports were low (Drake 1989, 84; Hirschman 1968). Landowners who had contracted mortgage credit right after the 1891 civil war, at a time when the Chilean currency was undervalued, were particularly opposed to the revaluation that would accompany conversion. They were supported by landowners who had incurred debts at the higher peso before the war. The latter were collecting windfall gains from the sharp depreciation of currency after the civil war (Conoboy 1976, 119). *Papeleros* exploited the fact that many *oreros* had strong ties to large foreign banks and foreign nitrate interests. They suggested that *oreros* were trying to impose an alien currency system on the country.

A fourth issue that pervaded debates in the legislature at the turn of the century was that of *social welfare* (See, for example, Chile, Camara de Diputados 1922, 682-783). The key protagonists on one side of the social welfare issue were laborers. Their policy preferences were expressed through various organizations, such as the Chilean Workers' Federation (FOCh) and anarchist and anarcho-syndicalist groups. The groups sought higher wages, collective bargaining rights, and better working conditions for laborers. Labor movement efforts were opposed by mineowners and industrialists represented by their peak organization, the SOFOFA (DeShazo 1983, 95-102).

In sum, politically relevant groups were competing to influence policy on at least four salient issues: confessional, trade, monetary, and social welfare policies. Were parties able to aggregate various groups' preferences over these four salient issues such that they formed a single dominant dimension?

Cohesion scores for major parties based on nominal votes in the Chamber of Deputies in

four congressional sessions from 1903 to 1921 show that parties were relatively undisciplined.⁷ (See Table 2). Not surprisingly, if we consider the cluster of liberal parties as a group, we find that only 63% to 75% of the various liberal party members voted together in four congresses from 1903 to 1921. The Radicals were only slightly more disciplined than the Liberals, voting together 70% to 82% on average, and the Conservative Party had relatively low cohesion scores averaging 75% in two sessions from 1903-1909. As mentioned earlier, high cohesion scores in a multi-party system do not necessarily indicate competition along a single dimension because three or more parties could conceivably be competing on two or more predominant dimensions. But lack of party discipline suggests that parties were not clearly defining the structure of competition and that deputies, and by extension, their supporters were competing to influence policy along more than one dominant dimension.⁸

(Table 2 about here)

Principal component analyses on legislative votes in the Chamber of Deputies support this interpretation. Analyses were performed on each of the four sessions to determine whether deputies' votes on bills were correlated with each other. The analyses indicate that votes on bills in the Chamber did not have a single dominant underlying structure. Bills clustered along three to five factors or dimensions, although most bills clustered around the first three dimensions extracted by the analyses. Table 3 presents eigenvalues, percentages of variance, and percentages of votes correlated with the first three dimensions in the various congressional sessions.

As shown in table 3, the first dimension extracted for the three congressional sessions from 1903-1918 describes a relatively low 25% to 37% of the variance shared by the votes of legislators on the bills used as variables in the analyses. The corresponding second factors extracted from votes in the legislature describes from 9% to a very high 20% of the variance. Only 23% to 36% of the votes in each of the first three congressional sessions examined were strongly correlated with the first dimension. Over 21% of the votes in the 1903-1906 and 1915-1918 sessions were strongly correlated with the second dimension. More votes on issues aligned onto the first dimension during the 1918-1921 congressional session; the first dimension extracted describes 38% of the variance in votes. But, only 44% of votes during the 1918-1921 session were highly correlated with this first dimension, indicating the persistence of transient coalitions on the remaining votes. The results of these analyses show that competition to influence policy occurred along more than one dominant dimension from 1903-1921, a period when corruption was endemic.

⁷ For lists of deputies by departments, see Valencia Avaria 1951, 361-471; 518-539. For party affiliation, see lists of deputies provided in *El Mercurio* (various dates before and after elections).

⁸ The relatively low cohesion scores indicate "shifting legislative majorities" (Valenzuela 1977, 97). This finding is also consistent with the work of Remmer (1984, 219) who found that "almost every important policy issue cut across party lines" during the parliamentary republic.

(Table 3 about here)

Was competition to influence policy in the second quarter of the century reduced to a single dominant dimension? As mentioned earlier, Chile experienced a series of regime changes from 1924-1932, including a bout of authoritarian rule under Ibañez. Several institutional changes occurred during this period that effectively removed from the congressional arena many issues that had been major sources of political contention. Thus, when democracy was restored in 1932, these issues were significantly less salient in the electoral arena and the potential for competition along a single dimension was much stronger.

First, a new constitution was adopted in 1925 formally separating the church and state, and the salience of clerical issues decreased substantially (Scully 1992; Smith 1982). Before 1925, Congress had veto power over the promulgation of papal decrees in the country and all major organizational changes within the Church. Congress also provided salaries for bishops and priests. The new constitution stipulated a graduated schedule for termination of salaries and support for church buildings, and the Church was given freedom to manage its own affairs.

Second, several banking, monetary and fiscal reforms were adopted in 1925 that reduced the scope of Congress's control over fiscal and monetary policy. Before 1925 Congress spent a substantial amount of time debating conversion to a gold standard. Advocates of the gold standard saw it as a remedy to the problems of currency depreciation and domestic price inflation, which were in large part due to the government's policy of printing money whenever revenues declined (Hirschman 1968). In 1925, a Central Bank was established and the country was placed on a gold standard. The bank was given the sole right to currency emission, and a statutory ceiling was set for the amount that government could borrow from the Central Bank. Additionally, Congress's authority over the budget was curbed. Congress was given the authority to trim projected expenditures proposed by the president but not to increase them.

Third, in 1928 a Ministry of Development was created whose functions included drafting general plans for state-led industrialization. The ministry was staffed by a new generation of public functionaries--so-called technocrats--who were shielded from congressional pressures by Ibañez (Silva 1994, 285). The ministry was the predecessor to CORFO which, as mentioned earlier, was created in 1939. CORFO had the power to draft and carry out specific economic plans *without* congressional approval. This implied a substantial reduction of congressional control over industrial policy.

In addition, the creation of CORFO indirectly eliminated another salient issue from the congressional arena--social welfare of rural workers. In the 1930s, labor associations were beginning to organize peasants and push for rural unionization. Moreover, working class groups were increasing their representation in the legislature. In 1932, the Communist Party of Chile won its first two congressional seats. In 1933, the Socialist party, which appealed to both rural and urban labor, was founded. In order to forestall changes in relations between landlords and peasants, a crucial number of deputies agreed to vote for the bill creating CORFO, but only in exchange for the administration's tacit agreement to forgo any bills advocating social welfare policies for rural workers (Loveman 1976).

In sum, many issues that were salient before 1925 were effectively removed from the congressional arena, and this made competition along a single, dominant dimension more likely. My examination of votes in the congressional sessions from 1937-1945 indicate that competition to influence policy did occur along a single party-defined dimension--in this case, a social welfare dimension with the Socialist and Communist parties on the left representing urban labor, the Radical party in the center, and the Liberal and Conservative parties on the right primarily representing landlords and capitalists.

As the cohesion scores in Table 2 show, parties defined the structure of competition from the late 1930s. The scores for almost all parties were higher than they were in the pre-1925 period. In the 1937-1941 congressional session, cohesion scores ranged from 89.8% to 96.9%. Scores for the 1941-1945 session increased, ranging from a relatively high 90.5% for the Radical party to a remarkable 100% for the Communist party.

More importantly, principal-component analyses of legislative votes in Chile indicate that parties were competing along a single dominant dimension. As table 3 shows, in both sessions from 1937-1945, one dimension clearly eclipsed the rest. The shared variance accounted for by the first dimension in each session was over 50%. The second dimension in each session from 1937-1945 captured 10% or less of the variance in votes. Seventy-nine percent of bills clustered around the first dimension in the 1937-1941 session; 67% clustered around the first dimension in the 1941-1945 session. The high eigenvalue for the first dimension in the 1937-1941 session relative to that of the 1941-1945 session is due to the larger number of contested nominal votes in the former session. The legislature was particularly prolific from 1938-1941 under the Popular Front government of President Pedro Aguirre Cerda.

The substantial amount of variance accounted for by one dimension and the high cohesion scores indicate that parties in Chile were competing along a single party-defined dimension during 1937-1945. Consistent with the theory presented earlier, campaign promises of incumbents and challengers became self-enforcing; incumbent parties began to face credible threats from challengers; and corruption declined. The credibility of politicians' promises cannot be measured directly. But the extent to which incumbents and their party leaders felt threatened by challengers is evident, not only in each party's efforts to expose opposition party members for corrupt behavior, as occurs in all competitive electoral settings, but also in party leaders' efforts to police their own members. When competition occurs along a single dominant dimension, and challengers can credibly promise more faithfully to represent incumbents' current supporters, then party leaders are likely to police their own party members more carefully to ensure that the party as a group maintains its electoral support and seats in the legislature.⁹

Indeed, Chilean parties in the 1940s were not only more vigilant in exposing their opponents for corruption, but politicians were almost as likely to denounce their own fellow party members for corrupt behavior. In September 1940, for example, Cesar Godoy openly

⁹ This finding is consistent with Barro's (1973) argument.

denounced his fellow Socialist, Marmaduke Grove, for receiving kickbacks in return for supporting one businessman's bid for a race track concession (U.S. Consular Despatch no. 798 1940). Similarly, in July 1943, Salvador Allende demanded a thorough investigation of another fellow Socialist, Oscar Schnake, who was rumored to have smuggled an illegal amount of dollars out of the country. The Socialist party was by no means alone in its attempt to maintain an image of probity. In December 1943, Conservative party leaders induced one of their own, Senator Maximiano Errazuriz, to repay a loan that the latter obtained for a private corporation through his political influence (U.S. Consular Despatch no. 8326 1943). Alternatively, while the Radical Party was dominant in coalition governments from 1937-1951, Radical presidents and the Radical party directorate devoted much time and effort to cleaning up government, or at least creating the impression that they were cleaning up their own house. As one U.S. ambassador noted in 1940, the Radical party was "making a greater effort than heretofore" to investigate charges of corrupt behavior and to "realize the program which [it] promised the people" (U.S. Consular Despatch no. 276 1940).

In sum, the level of corruption in Chile varied through time with changes in the structure of articulated interests. In particular, corruption was prevalent during the period under the parliamentary republic when competition to influence policy was multidimensional. Corruption declined as competition to influence policy aligned along a single dominant dimension.

4. Conclusion

In this article, I addressed the question of why corruption declines in some countries and not others. I presented a principal-agent model that shows that minimizing corruption among incumbents requires not only the presence of challengers, but also competition to influence policy along a single dominant dimension.¹⁰ The model illustrates that when competition to influence policy is multidimensional, challengers cannot credibly commit to act differently from corrupt incumbents; hence, citizens will be less prone to vote the current rascals out. Furthermore, when constituents' preferences are structured along more than a single dominant dimension, incumbents can appeal to different decisive majorities for political support each election, and constituents will have difficulty punishing corrupt incumbents. Conversely, the model shows that when competition occurs largely along a single dimension, challengers' promises can be credible. The credibility of challengers' promises keeps incumbents from exploiting their constituents and provides constituents with the means to punish corrupt incumbents.

I then examined the utility of this principal-agent model of corruption with a comparative statics analysis of Chile during 1891-1952. Evidence from the Chilean case is consistent with expectations derived from the model. Corruption was prevalent during 1891-1924 when

¹⁰ This conclusion is consistent with work by Geddes and Ribiero Neto (1992) who find a correlation between corruption and particularistic demands expressed along more than a single party-defined dimension.

competition to influence policy was multidimensional. Corrupt activity was significantly less common from the late 1930s when the structure of electoral demands aligned largely along a single dimension.

My work has implications for democratic theorists. It highlights a trade-off between representation and popular control of incumbents. If a society is composed of individuals with extremely heterogeneous preferences over policies, then precise representation of each individual's policy preferences will result in unconstrained, multidimensional competition to influence policy. But as this paper has shown, multidimensional competition provides politicians with the incentive and opportunity to exploit the citizenry. Thus, restricting consideration of policy preferences paradoxically improves the quality of interest representation. Although competition along a single dominant dimension restricts the number and substance of policy bundles available to choose from, it creates a virtuous circle of incentives and opportunities between politicians and their supporters.

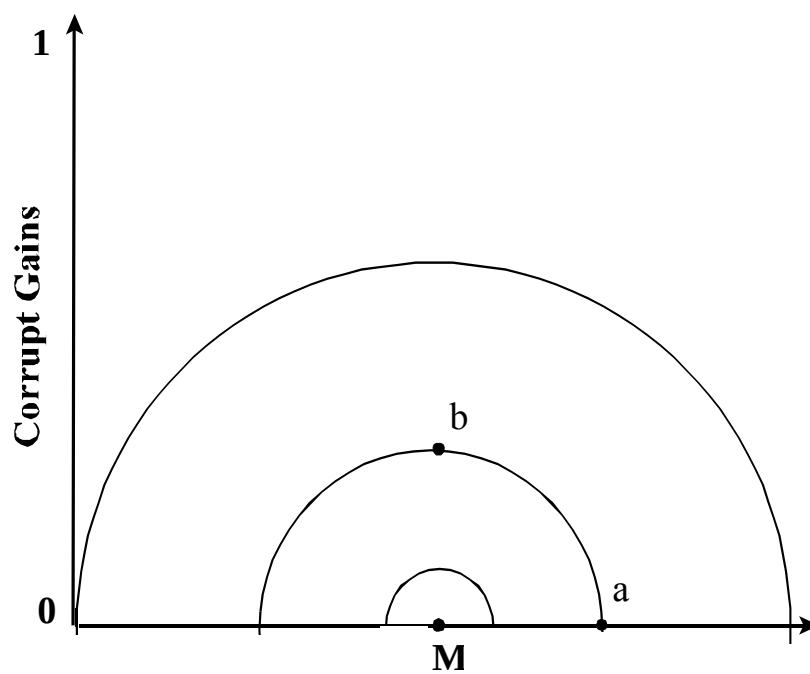
The question for future research becomes: What determines whether competition to influence policy will be restricted to competition along a single dominant dimension? In this article, I suggested that institutional changes reduced the salience of many issues that had been politically contentious in Chile, and these changes resulted in the alignment of legislative votes in the Chilean Congress along a dominant dimension. But this only begs the question of why such institutional changes were adopted. A fuller treatment of the question would require a theory of institutional change that might explain changes in Chile as well as those in other countries.

Figure 1. Model of Incumbent Control in Multidimensional Arena

	V1	V2	V3	I (1- $\sum V_i$)
t	1/3	1/3	1/3	0

$t + 1$	$\frac{1}{3}$	$\frac{1}{3}$	0	$\frac{1}{3}$
$t + 2$	0	$\frac{1}{3}$	$\frac{1}{6}$	$\frac{1}{2}$
$t + 3$	$\frac{1}{6}$	0	$\frac{1}{6}$	$\frac{2}{3}$
				
				
				
$t + n$	η_0	η_0	η_0	$1 - \sum \eta_0$

Figure 2
Model of Incumbent Control in Unidimensional Arena



**Table 1. Indicators for Trade, Foreign Exchange and Credit Rents
1912-1923, 1941-1952**

	Trade Rents (million)	BMER/ OER	Real Interest Rate	Return to Capital	Real Wages	
					Labor	Employee
1912-14	135.1	-	-	40.63	-	-
1915-17	138.3	-	-	29.70	-	-
1918-20	130.9	-	-	28.05	-	-
1921-23	222.5	-	-	20.92	-	-
1941-43	673.8	1.30	-8.53	14.75	103.13	110.83
1944-46	746.7	1.31	-2.53	16.24	115.47	119.77
1947-49	1054.7	2.44	-10.73	15.15	113.50	113.97
1950-52	1241.2	2.03	-6.93	6.20	127.63	135.63

Sources: Trade rents from 1912-1923 are in current pesos. Rents from 1944-1952 are in constant pesos (Base: 1913=100). For tariff revenues, imports and data on value added of the manufacturing sector: Chile, Oficina Central de Estadística. *Anuario estadístico* (Santiago, various years); For black market and official rates of exchange (BMER; OER): Jere R. Behrman *Foreign Trade Regimes and Economic Development: Chile* (New York: National Bureau of Economic Research, 1976), pp. 334-35; For real wages and real interest rates: Markos Mamalakis, "Public Policy and Sectoral Development: A Case Study of Chile, 1940-1958" in Markos Mamalakis and Clark Winton Reynolds (eds.), *Essays on the Chilean Economy* (Homewood, IL: Richard D. Irwin, Inc., 1965), pp. 67, 190-91.

Table 2
Cohesion Scores for Major Parties in Chilean Congressional Sessions*

Party	1903-06	1906-09	1915-18	1918-21	1937-41	1941-45
Conservative	76.4	74.5	90.9	90.3	90.2	99.1
Liberal ¹	62.8	65.2	74.7	72.9	89.9	94.7
Radical	77	70.7	79.0	81.8	91.3	90.2
Socialist ²					89.8	92.9
Communist ³					96.0	100.0
Number of Deputies	99	99	120	120	146	147

* Source: Calculated from nominal votes published in Cámara de Diputados, *Sesiones Ordinarias y Extraordinarias*, 1903-1945.

¹ Includes Liberal Democratic party from 1903-1921.

² The Socialist party was founded in 1933.

³ The forerunner of the Communist party--the Workers' Socialist party (POS) was founded in 1912, but failed to seat any deputies during the parliamentary period. In 1922, the POS was renamed the Communist Party of Chile (PC). The party won its first two congressional seats in 1932.

Table 3
Principal Component Analyses:
Legislative Votes in the Chilean Congress as Variables*

Congressional sessions	1903-06	1906-09	1915-18	1918-21	1937-41	1941-45
Eigenvalues						
Factor 1	3.10	6.76	6.40	2.55	18.98	4.53
Factor 2	2.16	2.51	2.64	0.71	1.02	0.81
Factor 3	0.70	2.03	0.82	0.63	0.99	0.43
% of Total Variance Explained						
Factor 1	29.23	24.69	36.55	37.85	66.22	56.35
Factor 2	20.34	9.18	15.06	10.51	3.57	10.13
Factor 3	6.62	7.43	4.67	9.41	3.47	5.30
% of Votes Strongly Correlated with						
Factor 1	34.8	23.2	36.3	43.7	79.1	66.7
Factor 2	21.7	8.9	21.2	12.5	0	6.7
Factor 3	8.7	5.3	0	12.5	2.3	0

* Source: Calculated from nominal votes published in Cámara de Diputados, *Boletín de Sesiones Ordinarias y Extraordinarias*, 1903-1945.

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