Pork for Policy: Executive and Legislative Exchange in Brazil

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The Brazilian Constitution of 1988 gave relatively strong powers to the president. We model and test executive-legislative relations in Brazil and demonstrate that presidents have used pork as a political currency to exchange for votes on policy reforms. In particular Presidents Cardoso and Lula have used pork to exchange for amendments to the Constitution. Without policy reforms Brazil would have had greater difficulty meeting its debt obligations. The logic for the exchange of pork for policy reform is that presidents typically have greater electoral incentives than members of Congress to care about economic growth, economic opportunity, income equality, and price stabilization. Members of Congress generally care more about redistributing gains to their constituents. Given the differences in preferences and the relative powers of each, the legislative and executive branches benefit by exploiting the gains from trade.

1. Introduction

It is part of the folklore of the democratization process in many Latin American countries that the power of the executive should be limited. No doubt this emerged because of past abuses. Limiting the executive by giving power to a Congress is not costless. In a utopian world, representatives should vote for the "good of the country," but in the real world they vote for geographic redistribution, e.g., one member of Congress wants a road while another wants an irrigation project. The incentive of the executive differs from that of members of Congress; as head of the country the executive is in a position to internalize the costs and benefits from policies affecting national interests

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more so than regional interests. As a result of differing electoral connections between the president and members of Congress, the president should care more about economic growth and elimination of inequality than would members of Congress. To better achieve these goals, it makes sense to give the executive relatively strong powers, provided the power is checked, e.g., by a veto in Congress and a free press. When Brazilians returned to democracy in 1985, they structured their federal institutions of governance in a way that retained strong powers for the president. The transition from a military dictatorship to a civilian government in Brazil during the first half of the 1980s was gradual and peaceful rather than revolutionary. As a result many institutions continued from the military regime to democracy. Most notable for our analysis was the retention of strong presidential powers. Had there been a clean break between regimes, there may have been no such retention. We argue that strong presidential powers are the key component in the relationship between the president and Congress. It should be made clear, however, that we are not claiming that strong presidential powers arose because they facilitate gains to trade—rather they arose historically and have persisted and evolved because they benefited those who had the power to change them.

Within the governance system of Brazil, seven parties currently play a significant legislative role. With seven active parties and a weak committee structure, one might imagine that policy is highly unstable in Brazil. Policy stability is important for economic development because it induces private investment, provided the policies are not punitive to investors. There may be a fine line between the ability to reform when needed and policy stability. In short, policy stability should not be confused with policy gridlock. One of the fundamental dilemmas in all representative democracies is how to induce stability in governmental outcomes while maintaining the ability to reform. Governments need a certain amount of elasticity in the policy space to adapt to changing domestic or international conditions.

We propose to analyze the mechanism in Brazil for inducing policy reform, along with expectations of policy stability. In Brazil parties and committees are far too weak to induce stability. Our analysis rests on the existence of strong executive power that in turn enables the president to mold a stable coalition in Congress. The coalition then functions as a strong party, though with an important caveat: The president is necessarily the leader of the coalition. Without the president at the helm of the coalition, it would be inherently unstable. Like most cartels, some enforcement mechanism is necessary to ensure compliance and prevent defections. Having the president as head of the coalition enables him to capture a large part of the gains from trade between the executive and legislative branches. Importantly, the electoral connection for the president rests on a strong economy perceived as satisfying the goals of economic growth, economic opportunity, and greater income equality.

As is the case of its American counterpart, the Brazilian Congress presents great potential for gains from trade, as well as similar kinds of problems concerning the enforcement and durability of such trades. Although there is a committee system in the Brazilian Congress, it does not fulfill the same purpose as that suggested by Weingast and Marshall (1988) for the case of the U.S. Congress. Pereira and Mueller (2000, 2004) show that party leaders routinely change deputies from one committee to another, even against their will, so that having a committee seat does not guarantee property rights over the agenda of the committee. Furthermore, bills can be (and are) routinely taken out of committee by the College of Leaders.[1] As a result, committees are not in a position to coordinate legislative exchanges.

Similarly, parties cannot play the coordination role because there are too many parties and no one party is large enough to ensure stability. As there are currently seven effective parties in Brazil, it is conceivable that a congressional institution could arise that would enable a cartel arrangement (coalition) to act as a dominant party, but so far this has not happened, and we will argue that it is unlikely to, given the powers of the executive.

For our purposes the most notable feature that emerged from the Constitution of 1988 was the extent of legislative powers conferred upon the executive.[2] The powers of most importance are: (1) the power to establish the status quo through provisional decrees, (2) the sole authority to initiate certain types of legislation, e.g., budgetary and administrative issues, (3) the execution of the budget, (4) the ability to appoint a cabinet (though, as with the United States, this is subject to the approval of the Senate), and (5) immense discretion over patronage jobs. We will elaborate briefly on each of these powers.

1.1 Provisional Decrees

The president has the power to change the status quo policy by issuing decrees that remain in force for 30 days unless overturned by a majority vote in a joint session of Congress. After 30 days, the president can reissue the decree. Provisional decrees have been used extensively and increasingly since 1988. According to Figueiredo and Limongi (2000a:155), from 1989 to 1997, presidents issued 446 provisional decrees (without counting reissues) and Congress rejected only 3%.[3] Monteiro (2000b) computed the number of provisional decrees in effect every month (including reissues) for each bill enacted

1. The College of Leaders is composed of the president of the House of Representatives, the leaders of all parties, and a nonvoting deputy appointed by the president. It arose informally during the drafting of the 1988 Constitution in order to expedite deliberations. Party leaders met prior to the constitutional sessions to negotiate the proposals that would be taken to the floor. The College seemed to suit the preferences of the party leaders and it became institutionalized in the House's legislative regimen in 1989 (Figueiredo and Limongi, 1996:31–36). The College of Leaders has close control of the legislative agenda, deciding which bills are taken to the floor. One of its main instruments for this purpose is the use of urgency petitions (discharge petitions), which take a bill from a committee and put it in the next day's order of business to be voted on the floor. Decisions within the College of Leaders are taken by majority vote weighted by the proportion of deputies in each party, so that the majority coalition is able to control the decision-making process.

2. For descriptions and analysis of the organization of the Brazilian Congress, see Figueiredo and Limongi (1996, 2000a), Pereira and Mueller (2000), and Pereira (1999).

3. Issuing provisional decrees may be a low-cost way of establishing policy and should not be interpreted as absolute power by the president. Given the veto power of Congress, the president must establish decrees that make a majority of members of Congress better off.

through regular legislative procedures. During President Cardoso's first and second terms, that number oscillated from 1.8 decrees per regular bill in April 1995 to 6.5 in July 1999, with a clear increase in the trend over time. The average life of a provisional decree over this period was approximately 20 months.[4]

1.2 Exclusive Initiation Rights

The executive has exclusive constitutional rights to initiate budgetary and administrative legislation. Budgetary legislation involves the elaboration of and subsequent changes to the budget. Administrative legislation includes laws that create new ministries, agencies, and even public corporations; new positions within the public sector; the mandates of the public entities; and the determination of wages within public entities, excluding Congress and the judiciary. Presidents use their exclusionary rights often and successfully. From 1989 to 1994 the president initiated almost 70% of the 1259 laws approved by Congress: 41% were budgetary decrees, 10% administrative, and 18% provisional (Figueiredo and Limongi, 1996:69).[5] The president also initiated successfully an additional 10% of the laws passed in areas over which he did not have exclusive rights. Cardoso continued the same pattern: He initiated 80.5% of all enacted legislation from 1995 to 1998 (Pereira and Mueller, 2000:48).

1.3 Execution of the Budget

The executive office not only initiates the budgetary process but also carries it out. After the executive submits a bill to Congress, the legislature may amend it. Many of these amendments entail pork barrel projects in a legislator's district. After Congress as a whole amends it, the budget goes first through a Combined Budget Committee that prunes out some pork.[6] From Congress the bill goes back to the president, who has line-item veto power. Once a bill is passed, the president decides which amendments get executed, based on political and budgetary considerations. For example, the president can argue that he will not implement an amendment because of insufficient tax receipts to cover the expenditure. Discretion over execution gives the president enormous power to reward or punish legislative behavior. Ames (1995a) first related budget amendments to roll call votes. Pereira (1999) and Pereira and Mueller

4. In 2002 Congress changed the rules governing the use of decree power, diminishing the president's discretion. Nevertheless, provisional decrees are still a key policy instrument for the executive.

5. The provisional decrees are not necessarily in areas where the president has exclusive rights of initiation.

6. Figueiredo and Limongi (2000b) argue that the members of the Combined Budget Committee are part of the coalition within Congress that aligns itself with the president.

(2000) provide further evidence that the president uses his discretion strategically.

1.4 Cabinet Appointments

One mechanism by which the president rewards legislative behavior is through cabinet appointments.[7] This power is used throughout a president's term to reward or punish voting behavior in favor of or contrary to the president's preferences. Cabinet appointments are usually distributed to parties, whose leaders then have more means to discipline their members. However, in some cases these appointments can go to particularly influential individuals who are able to deliver the support of several congressmen. Throughout his terms, Cardoso has been explicit about this mechanism in the media, making it well known that the appointment remained contingent on continual support in Congress.

1.5 Patronage

Patronage positions are numerous. Fleischer (1998) states that the executive controls over 40,000 jobs throughout Brazil. These range from cabinet positions to second- and third-rank jobs, which in most countries would be civil service appointments. Rather than simply rewarding friends who got out the vote, some of these positions go to standing members of Congress, suggesting that these positions can bring influence or wealth. Indeed, in many instances, time spent in Congress is an investment made to secure an executive appointment.

As a result of these five powers, the president has dominated the legislative agenda both in timing and content. The legislature rarely defeats the proposals of the president.[8] The preponderance of the executive in legislative procedures accounts for the claim by some scholars that the Brazilian Congress has abdicated its main constitutional authority to the executive.[9] We will argue that this notion goes too far because Congress as a whole has the power of veto to resist the executive's advances or even to change the rules that are the underpinning of the executive's powers. The fact that it has not done so suggests that a majority of members of Congress benefit from the status quo, as compared with a counterfactual world of multiple parties facing a severe collective action problem in the legislative arena. The College of Leaders has the potential to organize legislative exchanges but currently lacks any enforcement

7. See Amorim Neto (1994 and 2000) for analysis of cabinet appointments in Brazil.

8. See Figueiredo and Limongi (1996 and 2000a) for descriptive statistics. Some of the proposals may be strategically watered down or withheld by the president, as suggested by Ames (2001). Nevertheless, the record for the Brazilian presidents since 1988 and for Fernando Henrique Cardoso in particular are still impressive. The model presented in the next section explicitly shows how and when these trade-offs occur.

9. This thesis is defended, for example, by Monteiro (1997) and Pesanha (1997), cited in Amorim Neto (2000:8), and by Monteiro (2000a,b).

mechanisms for them. In short, outside of the powers of the presidency, there is no apparent extant institution within Congress that could improve on the status quo. The powers of the executive fill this void, enabling members of and parties within the coalition to achieve many of the gains from trade that arise through other mechanisms (e.g., committees) in other countries.

Our paper contributes to the literature that analyzes the effect of political institutions on public policy and policy outcomes (North and Weingast, 1989; Moe, 1990; North, 1981 and 1990; Levy and Spiller, 1994; Dixit, 1996; Haggard and McCubbins, 2001; Spiller and Tommasi, 2002). More specifically it is concerned with how countries' political institutions affect the trade-off between gridlock and instability that permeates all policymaking (Shepsle and Weingast, 1981; Weingast and Marshall, 1988). The way in which the political structure maps into the ability to reform and to commit has been a subject of growing interest in the literature. Our paper relates closely to several recent strands in this literature, particularly those concerned with institutions that determine legislative/executive relations. Our focus on the strong powers of the Brazilian president and his ability to bargain with a coalition with various preferences is directly related to the notion of separation of power and separation of purpose in Cox and McCubbins (2001) and Shugart and Haggard (2001). In this regard we argue that Brazil is an example of a political system that provides both high levels of governability and responsiveness to the median voter preferences. Our analysis can also be seen as a "veto player" model, where the coalition must agree with the president's proposals for them to be realized, much in the spirit of the models in Tsebelis (2002). Persson and Tabellini (2000:239–246) and Persson, Roland, and Tabellini (1997) provide models that show conditions under which the separation of powers between Congress and the president benefits voters by leading to policies that promote general welfare rather than private benefits to individuals or groups. Our paper is also related to the analysis in Epstein and O'Halloran (1999) regarding how the institutional characteristics of legislative/executive relations, such as divided government and party conflict, affect the decision by Congress whether to delegate policymaking. Finally, our analysis is perhaps most relevant to the comparative literature on the variation among presidential systems (Shugart and Carey, 1992; Haggard and McCubbins, 2001). We present a case study of a coalition-based presidential system with strong presidential powers in a context of multiple parties. Although this basic configuration may occur frequently in developing countries, the specific details of the Brazilian case lead to a much less common result: a divided government that can act decisively, and where pork does not necessarily have significant negative consequences. Understanding the conditions under which this occurs is a contribution toward a better understanding of the relation between political institutions and policy.

Our paper also contributes to the specific literature on Brazilian executive/legislative relations. For the particular case of Brazil there is considerable debate regarding how the political institutions affect the costs of governability and consequently outcomes. The traditional argument has been that electoral rules based on an open list system lead to multiple, fragmented, and undisciplined parties, where party leaders are unable to control their members' votes and presidents consequently face high costs in getting their proposals approved (Shugart and Carey, 1992; Mainwaring, 1993, 1999; Lamounier, 1994a,b; Ames, 1995a,b, 2001; Carey and Shugart, 1995; Mainwaring and Shugart, 1997). This view has recently been disputed by scholars who argue that Brazilian presidents since passage of the 1988 Constitution have had remarkable success in enacting their legislative agendas and that parties are disciplined and able to control their members (Figueiredo and Limongi, 2000a, 2000b; Pereira, 1999; Pereira and Mueller, 2002; Santos, 1997). According to this revisionist view, incentives from the electoral arena that push toward individualistic behavior are countered by the incentives within Congress that derive from the legislative powers of the president. We argue that not only have presidents achieved high levels of success in the legislative arena but they have done so at relatively low cost. One of the contributions of this paper is an explicit model of the microfoundations of legislative/executive relations that are consistent with the revisionist view.

In the following section we present a model in which a president uses his control over the agenda and patronage to pursue his preferred policy. We stress the trade-off between policy outcomes and patronage. In Section 3, we derive several results about the gains from trade and who receives them. In Section 4, we analyze pension reform from 1995 to 2004, as well as data from budget execution as a test of our model. In Section 5, we offer some concluding remarks.

2. A Model of the Brazilian Congress

In this section we present a model that captures the main elements of the executive/legislative relationship in Brazil. The important feature of the relationship is the agenda power held by the president. This does not mean, however, that the president can unilaterally impose his preferences on Congress: A majority coalition can restrict the policy preferences of the president. To the extent that the president has a greater electoral connection associated with economic growth, stability, and national public goods than do members of Congress, it is desirable to give the president relatively strong legislative powers. However, to the extent that the president has other goals or is incompetent, it is important that Congress be able to check his actions.

Our model is largely driven by the trade-off between policy outcomes and patronage, where the outcomes depend both on preferences and on the value of patronage to both members of Congress and the president, that is, on the existence of gains to trade. In our model are five political parties, each of which negotiates directly with the president. Although this is often a good representation of reality, as party leaders have several instruments by which to reward or punish their members, in some cases the transactions are with individual legislators. The model can be easily adapted to having each of the five coalition parties be a legislator in a five-member chamber. All legislators belong to a political party and parties either belong to the government's coalition or are part of the opposition. Both of these groups interact in congressional proceedings, constrained by the legislative institutions and subject to the powers of the executive. We assume that the parties are able to discipline their members.[10] The coalition and the opposition, on the other hand, face the usual coordination problems; however, the coalition is able to overcome this by having the executive at the head of government.[11]

Figure 1 shows the preferences of the president (P) and five parties (K_i, $i = 1 \ldots 5$) in a two-dimensional space composed of a policy issue on the horizontal dimension and patronage on the vertical dimension.[12] The policy can be, for example, the minimum retirement age, with the president preferring a higher age than that preferred by each of the parties.[13] The patronage dimension measures the value of patronage in the form of such benefits as individual budget amendments, cabinet posts, jobs, or cash provided by the executive to each party. Suppose that the number of legislators in each party are such that the president needs the support of any three parties to have a majority (and a three-fifths majority in the case of constitutional amendments). Thus in this example K_3, K_4, and K_5 will form the president's coalition and K_1 and K_2 are in the opposition.

The horizontal line shown in Figure 1 is the zero-patronage line. The points with asterisks are the parties' preferred policy points along the zero-patronage line. Whereas the president's bliss point is on the zero-patronage line, as he would rather not concede any patronage, the parties prefer infinite amounts of patronage, so their bliss points do not appear in the figure. The points shown with asterisks are thus the projection of their bliss points on the zero-patronage line. The ellipses show the indifference curves of each legislator to the status quo point SQ. These are labeled as $K_i^{SQ(\cdot)}$, $i = 1 \ldots 5$, where the superscript indicates that the curve represents all the points for which the party is indifferent to SQ. All points within the ellipse are preferred by the party to those on or

10. This is a controversial issue among students of Brazilian politics. The existence of party discipline within Congress has been strongly argued by Figueiredo and Limongi (1996; 2000a:162). Examining the data for the period 1989–98, they show that when a party in the coalition supported the president, its individual members generally did too, and when the party did not support the president on an issue, most members followed the party. On the other hand, the lack of party discipline has been argued by Ames (1995a,b, 2001), Mainwaring (1993, 1999), Mainwaring and Shugart (1997), and Lamounier (1994a,b).

11. Leoni (2000 and 2002), applied the W-NOMINATE procedure (Poole and Rosenthal, 1997) to the Brazilian Chamber of Deputies using roll call data from 1988 to 1998. His results show that the first spatial dimension explains over 90% of the deputies' individual votes for the 50th legislature (F. H. Cardoso, 1995–98). This justifies the use of a single dimensional policy issue in the model presented here. Also, the results show a clear spatial divide between the government's coalition (Partido do Movimento Democrático Brasileiro [PMDB], Partido da Social Democracia Brasileira [PSDB], Partido Progressista Brasileiro [PPB], Partido Trabalhista Brasileiro (PTB), and Partido da Frente Liberal [PFL]) and the opposition. Considering the first dimension, the spatial location of the medians of the major parties in the 50th legislature are as follows (range from –1 to 1): PT –0.826, PDT –0.514, PMDB 0.435, PSDB 0.457, PPB 0.518, PTB 0.546, PFL 0.682.

12. We thank an anonymous referee for suggestions on modifications to our original model.

13. The empirical section of this paper will use pension reform to test our model, and retirement age was one of the major policy concerns of Cardoso and now Lula. Both presidents preferred a higher minimum age than the median of each of the parties.

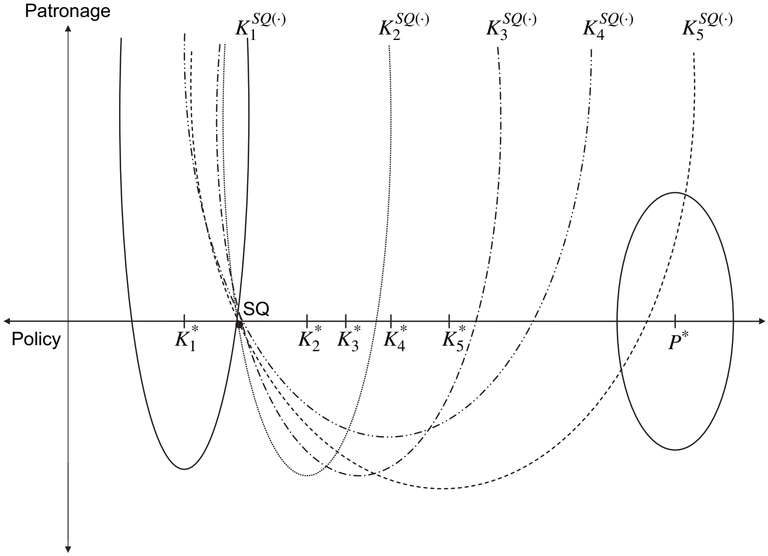

Figure 1. Preferences of the President and Parties in the Policy-Patronage Space.

outside the ellipse. Thus if the president used his agenda power to propose a policy at his preferred point P^*, all parties would vote against the proposal.

The president anticipates this outcome and thus acts strategically, proposing some point more palatable to a majority of parties. In order to show which point exactly the president would propose so as to improve on the status quo with the least cost in terms of patronage, Figure 2 shows a close-up of the previous figure with the point where each legislator's indifference curve through *SQ* crosses the zero-patronage line labeled as $K_i^{SQ(0)}$.[14] Without the use of patronage, the best the president could do would be to propose a policy at point $K_3^{SQ(0)}$, as this would be preferred to the status quo by both K_5 and K_4 and would be indifferent to K_3 (so we assume she would vote in favor). Note, however, that the president can do better than this by using patronage. By proposing a policy at point *B* and offering a value in patronage to K_3 valued at *AB*, the president gets favorable votes from a majority composed of K_3, K_4, and K_5, and reaches a higher indifference curve than would be achieved without the use of patronage $(U^p(K_3^{SQ(0)}) > U^p(A))$. Point *A* is the best the president can do with this configuration of preferences. Note that although the president incurs a higher cost in terms of patronage by proposing *A* rather than $K_3^{SQ(0)}$, he is better off doing so, as are K_4 and K_5. At the same time, K_3 is indifferent to both situations. Thus the president and some parties realize gains from trade by having a policy-patronage point at *A*.

In the example portrayed in Figure 2, the president provided patronage to only one of the parties. This was a result of the specific preferences portrayed

14. Note that this is different from $K_i^{SQ(\cdot)}$.

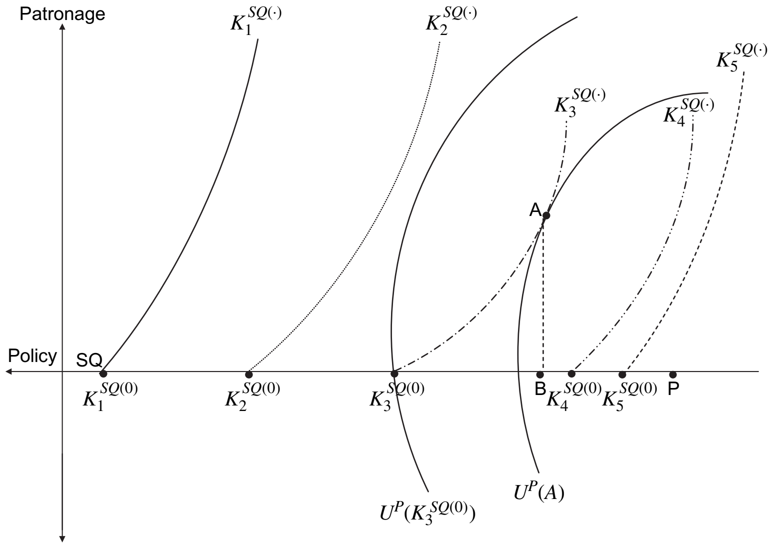

Figure 2. Gains to Trade in Executive/Legislative Relations.

by the indifference curves. In Figure 3 we slightly alter those preferences by moving $K_4^{SQ(0)}$ closer to $K_3^{SQ(0)}$to show a situation where more than one party receives patronage. In this case, the previous solution, policy at B and AB patronage to K_3, would no longer defeat the status quo. This is because K_4 prefers SQ to policy at B. Without giving patronage to K_4 the best that the president can do is to propose policy at $K_4^{SQ(0)}$ and give patronage to K_3 worth the

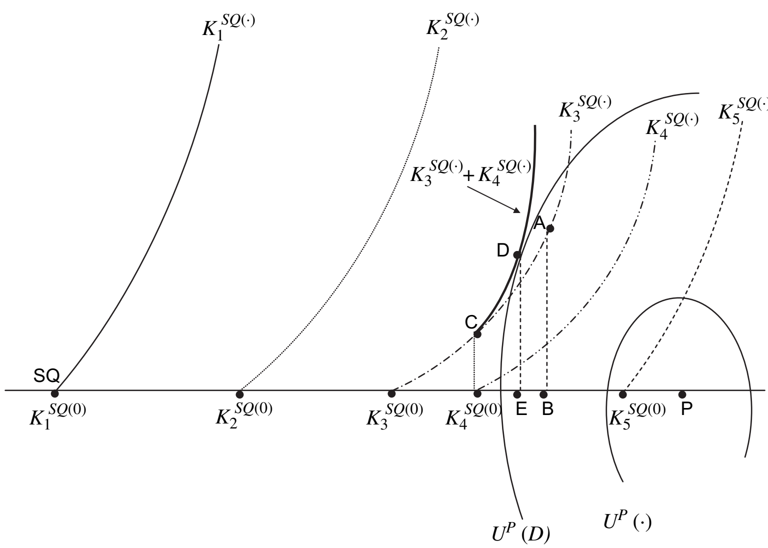

Figure 3. Patronage for Multiple Parties.

distance from $K_4^{SQ(0)}$ to C. However, he can do better than this by giving patronage as well to K_4. The dark line labeled $K_3^{SQ(\cdot)} + K_4^{SQ(\cdot)}$ is the vertical summation of the indifference curves of both K_3 and K_4 and thus shows the amount of patronage that the president would have to concede in total to compensate both K_3 and K_4. The most favorable indifference curve of the president is tangent to this curve at point D. The equilibrium in this case would thus be for the president to propose policy at point E and to give patronage worth DE in total to both K_3 and K_4. The amount given to each is the vertical distance from E to their indifference curve $K_i^{SQ(\cdot)}$, the sum of which equals DE. In this situation K_3, K_4, and K_5 would vote for the policy, and the president's utility would be $U^P(D)$. Note that if K_5's policy preference moved sufficiently to the left, that party too could receive patronage.

The model presented above stylizes the main forces that we believe mold the relationship between the executive and its coalition in Congress. There are several characteristics of that relationship not explicitly addressed in the model that should also be considered. The first is that the analysis so far has been made in the context of a one-off negotiation over a single bill; however, the relationship is a recurring one involving a series of bills and other procedures besides plenary voting. Therefore, the exchange of support for patronage may not be tallied on a bill-by-bill basis, but rather as the cumulative support provided by the party during the legislative year. Only exceptionally is there specific negotiation over individual bills that are particularly controversial and high profile (some examples involving pension reform are given in Section 4). The fact that the executive and the coalition play a repeated game helps ensure cooperation, as a party will be willing to forgo a chance to cheat on any given bill so as not to upset the relationship. Repeated play also limits strategic behavior.

Another characteristic of the relationship between the executive and the coalition during the two terms of President Cardoso is that the coalition held a supermajority of seats, approximately 66% in 1994 and 74% in 1998. This means that it was often the case that the executive would be able to pass several bills even without the support of some of the parties in the coalition. This fact also mitigates the weight of our assumption that party leaders are able to perfectly control their members. Even if some members of each party vote against or abstain on any given proposal, the coalition will still be able to approve the bill. This allows some parties or individuals to oppose, with the executive's concurrence, some bills that are particularly harmful to their constituencies, thus avoiding the electoral cost of supporting the bill. Of course the leeway is less in the case of constitutional amendments, which require a three-fifths majority (60%) and usually involve the more important issues.

3. Gains from Trade in the Brazilian Congress

The gains from trade are most easily illustrated in Figure 2. If the legislative institutions were such that the president still retained agenda power but did not have the ability to offer patronage, then the best he could do would be to propose $K_3^{SQ(0)}$. This represents an improvement for all coalition members considered together (president plus the coalition parties) compared with the status quo where utilities were the same for K_3 but lower for K_4, K_5, and the president. But it is an inferior situation compared with that of the president offering patronage, because with patronage the president can improve his position and the party is no worse off compared with the status quo.

The gains from trade, as always, arise from one actor having property rights to a good that is more highly valued by another. That is, they arise when the president gains more utility by giving patronage than the utility cost he incurs in doing so, and the parties gain more utility from the patronage than they lose by having policy move away from their preferred points. Clearly, some issues are sufficiently dear to the parties that it would require more patronage than the president would be willing to offer. In such cases the president would not even bring the proposal to a vote, which explains why some crucial issues, such as political system reform and tax reform, are consistently being postponed. Occasionally the president may miscalculate and propose a bill that will be rejected—however, such cases should be relatively rare.

Our model implies that all of the gains from trade go to the president, while the coalition parties that receive patronage remain just as well off as they did at the status quo. Coalition parties that do not receive patronage, such as K_5 in the example in Figure 3, are better off because the final policy improves their utility compared with the status quo. This result derives from the agenda power held by the president.[15] If the legislative rules were such that the president could not influence the agenda, and assuming that the same coalition were able to remain united, then the coalition could propose a bill at its median point and have it approved, because it has a majority of the votes to pass the bill and override any vetoes. If the legislative rules allowed the president to offer patronage, then he could still pull policy toward P, but the final outcome would be further from his preferred point than in the case where he had agenda power, as the reversal point would then be the coalition's median preference rather than SQ. It is the agenda power of the president that provides a structure-induced equilibrium that prevents cycling problems and provides stability to the coalition and policy decisions. If the president did not have agenda power and there were no other institution that had this effect, such as a strong committee system, we expect that the coalition would break and outcomes would become unpredictable. In short, there is currently no legislative institution that can solve the collective action problem within Congress of monitoring and enforcing legislative exchanges.

In our model the president receives all the gains from trade, but we stress that this does not imply that he is unconstrained by the coalition. The further apart the president's and the coalition members' preferences are, the less the president will be able to accomplish of his reform agenda. Our analysis also demonstrates that if an incompetent or ill-intentioned president proposed extreme policies, Congress would check the policies.

15. If there were a coordinating mechanism within the coalition that would enable it to credibly commit to a veto even when the president's offer was in the interest of some members, then the coalition would be in a position to extract the lion's share of the gains from trade.

The major conclusions from the discussion above are summarized in the following results:

Result 1: The Brazilian legislative rules are such that there are significant gains from trade for the members of the coalition and the executive from the exchange of support for patronage. The president's agenda powers guarantee the stability of the relationship and allow him to appropriate most of the gains.

The model can also be used to determine the effect of parametric changes in the cost of patronage to the president. Providing patronage involves a series of costs that are reflected in the inclination of the president's indifference curves. These costs arise for two reasons. The first is the opportunity cost to the president of depleting his capital, since the patronage used to purchase support for a given set of causes cannot be used for other ends. The second is the efficiency cost that arises from the fact that patronage, by transferring the right over specific decisions to members of party K_i, implies that policies and resource use in those areas may be distant from those that the president would prefer.[16] The slope of the president's indifference curves measures the cost of providing patronage because by definition those curves show how much patronage the president is willing to give in exchange for having policy move one unit closer to his preferred point along the no-patronage line. The greater the slope of the president's indifference curves at each point (that is, the more vertically elongated his preference ellipses), the more he cares about policy relative to patronage. Thus, the lower the cost of providing patronage, the greater the slope (in absolute value) of the president's indifference curves, and consequently the closer will be the equilibrium outcome to the president's preferred point. In Figure 3 an increase in the slope of $U^P(D)$ would imply a tangency point to $K_3^{SQ(\cdot)} + K_4^{SQ(\cdot)}$ that would yield a policy closer to P than E, with more patronage being given to K_3 and K_4 than DE.

The shape of the president's utility curves are primarily determined by his preferences for policy versus patronage. However, they are also determined by the institutions in Congress and the executive, which influence the level of costs that determine the amount and quality of patronage a president has to offer, as well as the level of transaction costs involved in doing so. In Section 1 we showed that in Brazil political institutions endow the president with several means of providing patronage at low cost, such as the control of the execution of individual budget amendments. If any of these institutions were altered, affecting the costs of providing patronage, the president's indifference curves would change, which in turn would lead to a different outcome. The effect of a parametric reduction in the cost of patronage to the president is to move the policy outcome closer to the president's preferred point. This happens because greater gains from trade can then be realized from the exchange of each unit of patronage.

16. There may also be a public opinion component to this cost given that the media tends to denounce the use of patronage as if it were less than legitimate.

Result 2: Changes that reduce the cost of patronage to the president and of transactions with the coalition parties lead to greater gains from trade and policy outcomes more favorable to the president.

Policy outcomes can also be affected by parametric changes in the indifference curves of the coalition parties. These curves measure how much patronage a party must receive in order to vote for a policy further away from its preferred point and remain just as well off. The steeper these curves, the lower the value of patronage to the party relative to the value of the policy. Thus the less vertically elongated their preference ellipses, the more the parties value patronage. In addition to the parties' innate preferences for policy and patronage, political institutions also influence the shapes of their indifference curves. Changes in legislative or electoral rules, or in voters' preferences or behavior, may alter those curves. In Figure 3, a parametric increase in the value of patronage to the parties implies flatter indifference curves and consequently more favorable policy outcomes to the president. For example, if the president is undergoing a period of intense popularity it will be more valuable for a party or individual to hold or control a governmental post, as this popularity may rub off onto those seen by the electorate as participating in the government. As another example, the easier it is for the legislators to use patronage so as to benefit themselves, the more highly it will be valued. If the country's institutions make it more acceptable for a legislator to derive rents from a pork barrel project taken home, then the execution of a personal amendment to the budget is more valuable to a legislator.

Result 3: The larger the benefit that the members of the coalition are able to derive from a given amount of patronage, the greater the gains from trade and the more favorable will be policy outcomes to the executive.

Finally, a perhaps counterintuitive implication of our model is that the president will have to offer more compensation to those coalition parties that are further from his preferences. In Figure 3, for example, K_3 is the furthest from P and received the majority of patrontage, DE, the total amount of patronage that was given. K_4 was more aligned with the president than K_3 but nevertheless received less patronage. And K_5, which was even closer to P, received no patronage at all.[17] K_1 and K_2, which are not part of the coalition, also received no patronage. In this regard our model has a similar implication to the model in Snyder Jr. (1991): "In order to obtain favorable legislation the president should

17. Clearly this creates an incentive for coalition members to falsify their preferences so as to obtain more patronage and a disincentive for the like-minded parties to remain loyal. Because our model is a one-shot game, it cannot be used to address this issue, which is inherently dynamic. However, we note once again that these perverse incentives are partly checked by the recurring nature of the relationship, as well as (when this is the case) by the existence of a supramajority. Also, in a congressional setting it is not easy for a legislator to falsify his/her preferences, as their history, past behavior, constituency links, etc., are constantly scrutinized and are consequently well known by other players.

allocate the distributive benefits he has at his disposal to the congressmen who are slightly opposed to his proposal."[18] In the following section we will test this implication with data on patronage distribution.

Result 4: The further the preference of a coalition party from that of the president, the greater the patronage that party will receive. Therefore, coalition parties that have more divergent preferences from those of the president will receive, *ceteris paribus,* more compensation than those parties closer to the president, up to the point where the president has the number of votes that he needs.

4. Evidence from Pension Reform

The success rate of the Brazilian executive in getting its projects approved in Congress has been impressive. Of the 1,881 bills presented by the various presidents from 1989 to 1997, 77% were approved and only 1.3% were rejected, the remaining having been withdrawn or still in progress (Figueiredo and Limongi, 2000a:155). The performance of the Cardoso presidency has been even stronger, with an approval of 95.3% of its proposals in the House during his second term (*Jornal do Brasil*, "Governo Faz Mais Leis que Congresso," April 7, 2001, Política). At first sight this record may lead one to believe that the executive is able to pursue its agenda with practically no interference from Congress. However, the same outcome can also be explained by a relationship between the executive and the legislature, as modeled in the previous section. The executive achieves a high rate of success in getting its proposals approved through its power to set the agenda together with the strategic use of patronage. Providing evidence to support this model is not easy, because a high rate of approval is predicted by both hypotheses.[19]

The percentage of presidential bills approved per se does not provide much information on the prior explicit and implicit bargaining between the executive and Congress in order to ensure approval. For many proposals the preferences of the coalition are close to those of the president, and approval follows without bargaining. In other cases preferences are further apart but the combination of patronage and compromise in changing the policy leads to approval. In still other cases the preferences are so divergent that no such compromise is feasible. When the president perceives preferences as widely divergent, he most likely will withhold the proposal rather than face defeat.

According to our first result, there are significant gains from trade from the exchange of support for patronage. Evidence of patronage should be particularly visible in those instances where preferences diverged but not so much as to rule out exchanges. We should expect to find that the voting behavior of members of the coalition is rewarded or punished by the executive by (i) granting or removing the right to make appointments to patronage positions and

18. We thank an anonymous referee for bringing Snyder's article to our attention.

19. Other authors that have stressed the importance of patronage in executive/legislative relations in Brazil include Ames (1995a,b), Amorim Neto (1994, 2000), Figueiredo and Limongi (1996), Pereira (1999), and Santos (1997).

(ii) executing or failing to execute the amendments in the budget related to specific legislators. Although there are systematic data available on individual amendments (which we describe below), there are no systematic data on posts in the federal government that have been assigned to deputies. It is usually quite clear which political party, and sometimes even which individual within a party, has been given property rights to appoint cabinet members and several other high-ranking positions. Even with lower positions, such as the head and directors of local branches of many federal companies, pundits and the press will often comment on which congressman will choose the appointee. However, given the huge number of posts available for negotiation (Fleischer, 1998, estimates this number at 40,000), the unofficial nature of the link between patron and appointee, and the transitory nature of appointments, it is very difficult to collect systematic information.

To test the hypotheses from the previous section we will look at pension reform during both Cardoso terms, from 1995 to 2002. Our strategy is to associate the use of patronage with specific instances when Congress voted on divisive issues. This will be done in two ways—the first using evidence from the press, and the second econometrically testing the determinants of the execution by the president of the amendments to the budget proposed by congressmen. We choose pension reform because it is a key element in any plan for economic growth and stabilization, and it has been by far the most contentious issue discussed in Congress in the past ten years. Cardoso sent his first proposal on pension reform to Congress in March 1995, shortly after he took office, and in eight years achieved only limited reform. President Lula, who took office in January 2003, chose pension reform as the first major issue to be tackled. (See Table 1 for a chronology of activity.)

At first sight, the choice of focusing on pension reform may seem odd, as this was where the president was able to approve less of his initial proposal. Resistance by Congress not only forced compromises in terms of policy proposal changes, but made it very difficult for even approved proposals to get through. Given that we are arguing that the Brazilian system provides high levels of governability at relatively low cost, pension reform would seem to be proof of just the opposite. However, the advantage of focusing on pension reform is that this is perhaps the issue over which the preferences of President Cardoso and his coalition most differed but where nevertheless the president insisted on pushing forward. Whereas most other issues appeared to be routinely approved without much scrutiny from Congress, resulting in the high success rates for the president described above, on this issue conflicts were more visible and it becomes easier to analyze how these are dealt with. Given the critical state of the Brazilian pension system, any reform would necessarily involve diminishing of benefits considered as an acquired right by most of society. The upshot was that practically all voters, and especially several well-organized groups such as civil servants, the military, and judges, strongly opposed the pension reform plan. Therefore, congressmen were very reluctant to be seen as supporting the reform, and what ensued was the negotiation between the president and Congress that is described below. That Cardoso insisted on the reform, and

Table 1. Chronology of Pension Reform

Date	Event
1993	Congress initiates constitutional reforms.
1995 Jan.–Mar.	F. H. Cardoso takes office on January 1 and sends the pension reform proposal to Congress three months later.
1995 Mar. 16	Pension reform proposal **sent to Congress**.
1995 April	Committee of Constitution and Justice approves pension reform proposal.
1996 Mar. 6	Pension reform proposal instituting minimum years of contribution to the pension system is **rejected** in the House. The vote was 294 in favor to 190 against and 8 abstentions (approval of constitutional amendments require 308 votes in favor).
1996 Mar. 21	Pension reform proposal **approved** in the House after intense use of patronage.(351–139–2).
1996 Apr. 12	Supreme Court judge accepts injunction by the opposition **suspending** the legislative procedures on pension reform.
1996 Apr. 29	Cabinet reshuffled.
	Extraordinary Ministry for Political Coordination created.
1996 May 8	Supreme Court overrules injunction **suspending** pension reform deliberations.
1998 Feb. 11	Constitutional amendment **approved (**345–152–3) in the House setting minimum retirement age at 60 for men and 55 for women. Previously there was no minimum age, only the requirement of having worked for 35 years for men and 30 for women.
1998 May 6	Constitutional amendment establishing minimum retirement age **rejected** in its second voting in the House (307–148–11).
1998 May 23	Minimum retirement age of 53 for men and 48 for women (for those already in the social security system) **approved** in the House.
1998 Nov. 5	House **approves** (346–131–3) minimum retirement ages of 53 for men and 48 for women in bill's second pass through the House.
	A ceiling for public sector pensions is allowed.
	Intense negotiations with deputies precedes the vote.
1998 Dec. 3	House **rejects** (187–209–7) constitutional amendment increasing contributions of active civil servants from 11% to 20%, and of retired civil servants who receive above 1,200 *reais* from 0% to 11%; government needs 200 votes to approve provisional decree. Loss estimated at US$2.2 billion per year.
1998 Dec. 12	House **approves** a bill to increase pension contributions from charities, churches, hospitals, schools, and small businesses.
1999 Jan. 4	Ministerial reform is undertaken to help approve fiscal adjustment plan.
1999 Jan. 14	The *real* is allowed to float; suffers large devaluation.
1999 Jan. 20	House **approves** (335–147–4) law that increases contributions by active and retired civil servants. Once again patronage is intensely negotiated.
1999 Oct. 1	The Supreme Court **declares unconstitutional** the previous law raising the contributions of active and retired civil servants.
1999 Oct. 6	House **approves** (301–157) a law that changes how private pensions are calculated; simple majority required.
2000 March	Supreme Court rules that law altering private pension calculations **is constitutional**.
2001–2002	Proposal to amend the Constitution so as to overcome the Supreme Court ruling against increasing contributions of active and retired civil servants is **stalled** in Congress.
2003	Lula government takes office; places pension reform at the top of the agenda. The reform that is approved in this year is very similar to that which had been proposed by Cardoso.

that President Lula has done the same, despite its electoral unpopularity, is testimony to the internalization by the president of broader issues such as monetary and fiscal stability.[20]

The Cardoso administration viewed pension reform as urgent because since 1997 contributions of workers no longer covered the expenditures on pensions. The fiscal demand of funding pensions is in part reflected in the borrowing costs of the government and has perverse consequences for price stability and continued economic growth. Outside observers (economists in academia, the World Bank, the International Monetary Fund, and the press) have noted the lavish and unsustainable nature of Brazil's pension system:

> The Brazilian pension system has broken just about every rule known to actuaries. It fixes no minimum retirement age, and allows a host of exceptions and special cases. It allows retired people (called, wonderfully inaccurately,"inactive workers") not only to draw more than one pension but also to go on getting a wage as well. Perhaps uniquely, Brazil not only allows some pensioners to retire on a higher income than they had when working, but also increases their pension every time their working colleagues get a wage rise. (*The Economist*, June 7, 1997, p. 37)

Although the need for change is not controversial, the devil is in the details. Those who are already retired and those who are currently in the workforce have come to see the benefits promised by the current rules as a property right. The courts have tended to agree. Any solution necessarily implies redistribution and generates opposition, which is reflected in Congress. In addition, many congressmen have a direct stake in pension reform; 120 members of the 518-seat house collect pensions.[21]

The first defeat for the executive's pension reform occurred in March 1996. The proposed bill addressed some of the more blatant distortions of the pension system. It required 35 years of contributions for men and 30 years for women, rather than simply years of service. In the private sector there was no age requirement for retirement, but in the public sector the bill imposed a minimum retirement age of 55 for men and 50 for women, which would be increased to 60 and 55 in 2001. The bill would have capped pensions for the private sector at ten times the minimum wage (approximately US$1,000). Civil servants would continue to receive the same as their pre-retirement wage but the current 20% bonus on retirement would be deleted. The bill also eliminated the accumulation of multiple pensions. Elected politicians who retired from

20. Although the major objective of reforming the pension system should be to avoid the bankruptcy of the social security system and to establish a system that is fair and feasible, it is probable that the president may be concerned primarily with reducing the large deficits generated by the system, which have important short-term consequences on the economy's performance for which the president is seen as directly responsible by voters.

21. David Fleischer cited in Associated Press, "Brazil's Congress to Vote on Key Economic Reform Measure," *Business News*, January 20, 1999.

another job were allowed to continue to receive a salary in addition to their pension.

Many issues in pension reform require a constitutional amendment, which entails a three-fifths majority of the House (308 of the 513 deputies), and the bill must be approved in two separate votes in both the House and the Senate. After the first vote in the House, the government came up fourteen votes short. President Cardoso responded quickly and within two weeks sent a new bill to Congress. This time, he was very careful about his strategy. He attenuated some of the more controversial parts of the reform and made intense use of patronage, leading to passage in the House:

> For the next two weeks, the President went to work. He held a meeting with 64 PPB congressmen, hosted a gala luncheon with one leading critic in the PMDB, and made telephone calls to state governors. Just what went on behind closed doors is anyone's guess, though the evidence is mounting that it was plenty. By March 21st, order was restored. The lower house backed the welfare reform.
>
> So all's well? Not quite. The welfare reform has been weakened, to tinker with encrusted privileges not dismantle them' Still, "we made the only advance that was possible," said a relieved Mr Cardoso, thanking the legislators who supported him. And he paid for it. . ..
>
> Pork was on the menu in several states. The first time round, all seven congressmen from Rondonia, a small state in the Amazon, voted against the government's welfare reform. After a cordial chat at the Planalto, all seven changed their minds. Soon $16m in federal cash will go to improve an important road in Rondonia, and one of the state's favourite sons will be heading the local arm of the federal telephone company. Pure coincidence, say officials in Brasilia. The drought-parched north-eastern state of Paraiba won money for an irrigation canal and reservoirs. A power plant was promised for Rio Grande do Sul. The government was no less open-handed with jobs and promotions. (*The Economist*, March 30, 1996, p. 45)

The difficulties encountered in approving pension reform signaled to the government that the successful completion of more of its reforms would be a more demanding task than had been anticipated. In the following month Cardoso reshuffled the cabinet so as to strengthen the government's base of support in Congress. In addition Cardoso created the Special Ministry for Political Coordination, whose purpose was to mediate and facilitate the channeling of the demands of coalition members to the executive, and the distribution of patronage in return for political support (Fleischer, 1998:91). Keeping track of each legislator's demands and voting performance is a formidable task, so it is natural that means to do this more effectively would be sought. To better monitor legislative behavior over time the Ministry of

Political Coordination created the System of Legislative Performance (SIAL), which centralized all requests by legislators to any governmental agency or ministry, thus preventing any double granting of patronage or any omission (Pereira, 1999:107–108). In announcing the creation of the ministry, President Cardoso justified it by saying, "When Congress wants to say yes and can't manage to do so it is necessary that we get together to create conditions to make the dialogue flow better" (*O Estado de São Paulo*, "FH pede ao Congresso que Acelere Reformas," April 30, 1996).[22]

The second defeat to pension reform came in May 1998 when a proposal instituting a minimum retirement age of 60 for men and 55 for women lost by one vote. The proposed legislation would have significantly reduced the government's pension bill. The bill was defeated despite the executive's usual appeals and negotiation with its coalition in Congress, a sign of how divisive this issue was, particularly in an election year. After the upset, the executive announced that those deputies who had had their requests granted before the vote and did not keep their part of the bargain risked having their individual amendments to the budget shelved and their appointments to positions in the federal government reexamined (*Gazeta Mercantil*, "FHC Ameaça Retaliar Infieis," May 8, 1998).

Two weeks later the president sent another bill to Congress. (Below we examine the impact of the May 6 and 23, 1998, pension-reform votes on the president's approval of budgetary amendments.) This time Cardoso changed the minimum age for retirement to 53 for men and 48 for women, valid only for those already in the social security system. In terms of our model, this change can be seen as a compromise in the policy proposed by the government. The defeat in the House showed that the coalition's preferences, which were for a much lower age, were more intense than expected. Even the negotiation of patronage did not guarantee the approval of the bill. Rather than simply offer more patronage to ensure the next vote, the executive opted to mitigate the age requirements. The new bill was approved and finally sealed in a second vote in November 1998. For this final vote, the executive took no risks:

> President Cardoso dispensed with his trademark aloofness of his first term and openly pushed for his program, meeting with party leaders and sending telegrams summoning coalition members to vote. A bloc of 37 legislators representing agricultural businesses was promised by the Government that it would delay repayment of more than $1 billion in farmers' debt in return for their votes, said Hugo Biehl, leader of the farmers' bloc in Congress. The Government also granted farm businesses $280 million in concessions in exchange for their support. (*New York Times*, November 6, 1998, A11, col. 1)

22. The creation of the Special Ministry for Political Coordination is consistent with Result 2 in our model: Changes that reduce the cost of transactions between the executive and the coalition lead to greater gains from trade and policy outcomes more favorable to the executive. The purpose of the new ministry was to facilitate transactions and thereby prevent future defeats in Congress.

Having exhausted his options regarding age requirements, the president turned to addressing two different margins of pension reform: the size of the tax on income for pensions and the number of taxpayers. Resolution of these two issues was especially important to the president because it would provide some immediate financial relief at a time of imminent monetary crisis.[23] In December 1998 the House voted to increase pension contributions of civil servants from 11% to 20% of their wages and to start taxing the pensions of retired civil servants. This measure would provide an added US$2.2 billion to the government's coffers over the next year. This measure was bitterly opposed by civil servants, who already saw their contributions as too high, and by the retired, who saw their pensions as too low. The measure was defeated in the House:

> As the vote on the pension approached, some coalition allies jostled for Cabinet posts. Others fielded calls from opponents of the bill. One hundred legislators just stayed away. Political analysts say the pension bill failed because the Government, overly confident, neglected the legwork to rally support. The administration also packed too much into one measure, focusing on active and retired government workers along with other groups because of time pressure. (*New York Times*, December 12, 1998, A16, col. 3)

In the following month Congress called off its summer recess in an effort to vote a series of backlogged bills. At the same time, Cardoso changed several ministerial appointments in order to adapt his cabinet to changes in the newly elected Congress that would commence in two months. In part, due to the failed pension reform, the pressure on the national currency became overwhelming and Brazil set the *real* afloat, resulting in a large devaluation.

In this scenario Cardoso sent to the House a new measure to increase the pension contributions of active and retired civil servants. This time the executive argued that pension reform was necessary to pull the country out of the economic crisis arising from the devaluation of the *real.* In addition, the heightened need for the measure made Cardoso more willing to exchange pork for support. Congress approved the bill by a safe margin and instituted the new contributions immediately. But a few months later (October 1999) the Supreme Court declared the law unconstitutional, forcing the government to revert to previous levels of contributions and return the additional revenue that it had obtained. Cardoso threatened to change the Constitution so as to allow higher levels of contributions but, sensing the difficulty of getting these changes through Congress, attempted only minor changes to the pension system during the remainder of his term.

In January 2003 the new Lula government stepped into office and immediately announced that pensions would be the first major reform it would

23. By this time there was a widespread belief that the Brazilian *real* was substantially overvalued.

address. Lula hoped to make the most of his high level of popularity and the momentum from his electoral victory to tackle pension reform, taking advantage of the sense that a left-wing government would have greater legitimacy to impose the kinds of fiscal changes that are necessary (Abranches, 2003:62). Interest groups immediately mobilized to pressure against losing their so-called "acquired rights." Federal judges, civil servants, and the military were quick to express their opposition to losing their privileges. By the end of 2003 the government had succeeded in passing pension reform through Congress.[24]

4.1 Evidence of the Strategic Use of Individual Budget Amendments

We now analyze the relationship between the voting behavior of the deputies and the execution of their budget amendments by the president. In Brazil the executive first proposes the yearly budget and then it passes through Congress, where it can be amended by legislators. The amendments generally consist of expenditures in the congressperson's district, with the hope of yielding both votes and rents from constituents.[25] Following passage of the budget in Congress, the bill goes back to the president, who has discretion over implementation. The process gives the president enormous leverage for rewards and punishments. The president frequently shelves some amendments on the grounds that tax receipts are insufficient to cover all expenditures, though in many instances there appears to be little fiscal merit to his veto.

One of the implications of our model is that there should be a direct link between the voting behavior of the members of Congress and the execution of their individual budget amendments. In order to test this implication we focus on one particular instance when the president had a proposal rejected and a couple of weeks later submitted a new attenuated proposal that Congress approved. The specific case, already described above, involved a second-round defeat in the House of a proposed minimum age for retirement of 60 for men and 55 for women (May 6, 1998) and the subsequent approval of a minimum age of 53 for men and 48 for women (May 23, 1998). Our strategy is to regress the percentage of the total value of each deputy's amendments that were executed in 1998 on a series of variables that should have affected the president's decision whether to execute those amendments. The key explanatory variables will be two dummies: (1) those deputies who switched their vote from no (against the president's proposal) to yes, in favor of the president's proposal; and (2) those deputies who switched their vote from yes (in favor of the

24. It is noteworthy that a left-wing government that strongly opposed the reform proposed by its successor adopted basically the same proposal and pursued it in Congress using the same methods based on distribution of patronage, which it customarily criticized as immoral and illegitimate. This behavior is consistent with our framework of executive/legislative relations in Brazil, as it postulates that the actors' behavior is determined by political institutions. Because these institutions did not change, it is reassuring that political behavior also remained the same.

25. Samuels (2002) argues that the relationship between pork and reelection is indirect. In return for pork, e.g., a construction contract, a construction company will give money for financing a campaign, which in turn improves the probability of a congressperson's being reelected.

president's proposal) to no, against the president's proposal. For pension reform a supermajority is needed. The first vote tallied 307 in favor, 148 against, and 11 abstentions, missing the 308 approval mark by 1 vote. The second vote tallied 333–149–3, with 15 switching from no to yes and 9 from yes to no, the balance being explained by abstentions and absences.[26]

The other explanatory variables are: (i) *Votes:* the percentage of times the deputy voted favorable to the president's position in the 1995–1998 period; (ii) *Exec. Amend. 1997:* the percentage of the total value of individual budget amendments that were executed in the year 1997; (iii) *Position:* a dummy that equals 1 if the deputy held a powerful position within Congress during that year, such as speaker, party leader, committee president, or rapporteur; (iv) *No. Amendments:* the number of amendments submitted by the deputy that year; and (v) *Seniority:* the number of terms served by the deputy.

Votes should capture the degree to which the president uses the execution of the budget amendments to reward or punish those who vote for or against his proposals. To control for the endogeneity of voting behavior, we estimated Votes simultaneously using instruments, including dummies identifying whether the deputy was a member of a party in the core coalition, on the fringe of the coalition, or in the opposition.[27]

Exec. Amend. 1997 should capture any persistent capacity to get amendments executed. For example, a given deputy might have a more capable staff than others, which can affect her chances of execution. The Position and Seniority variables should capture the effect of influence and experience, and No. Amendments is primarily a control variable and should measure whether those who propose more amendments have a greater or lesser likelihood of having amendments executed.

We present descriptive statistics and results in Tables 1 and 2. Deputies who voted in accord with the president received more pork in terms of budgetary amendments. A 10-percentage-point increase in Votes (.4 of the SD) increased the proportion of the value of a deputy's amendments that were executed by almost 3%. Not surprisingly there appears to be considerable stasis in the reception of pork as indicated by the coefficient on Exec. Amend. 1997. This may partially explain why the coefficients on Position and Seniority are not reliably different from zero. Of course this does not rule out that Position and Seniority have payoffs other than budget amendment execution. The coefficient on No. Amendments is small; an additional amendment leads to an increase of only 0.42% in the value of total amendments that are executed.[28]

26. Considering abstentions and absences as strategic did not significantly alter our results.

27. Our determination of which instruments to use was based on the assumption that being a member of the coalition or not affects how a deputy votes, which in turn affects the execution of the deputy's amendments.

28. It could be argued that the choice of how many amendments to submit is affected by the deputy's expectation of having them approved and executed, in which case this variable is endogenous. Treating No. Amendment as endogenous reduced the size and significance of the coefficient by did not affect the other results.

Table 2. Descriptive Statistics

Variable	Mean	SD	Min	Max
Exec. Amend. 1998	20.534	21.054	0.00	98.45
Votes	0.766	0.258	0.048	1.00
Exec. Amend. 1997	52.019	33.128	0.00	100.00
Position	0.310	0.463	0.00	1.00
No. Amendments	3.149	4.009	0.00	27.00
Seniority	1.936	1.289	0.00	8.00
No to Yes	0.248	0.155	0.00	1.00
Yes to No	0.015	0.121	0.00	1.00

The results of most importance for our model of exchange of pork for policy are the coefficients *No to Yes* and *Yes to No*. Switching votes from opposition to the president's proposal for establishing a minimum age for retirement to support for a minimum age increases the value of amendments by 11%. Changing votes from yes to no had less of an impact but was still reasonably large: a 5% decrease in pork. Overall the results are consistent with our expectations and when combined with the qualitative evidence indicate a strong case in favor of our model of gains from trade between legislators and the president.

Finally we test Result 4 of our model: The president will deliver more benefits to legislators who are in the coalition but further from his preferences than he will to those who are closer. To do this we use the index created by Leoni (2000, 2002) as a measure of the "ideological" position of each legislator and the president.[29] This index is the first dimension of a W-NOMINATE procedure (Poole and Rosenthal, 1985), which alone typically explains over 90% of the variation of deputies' votes in Brazil (Leoni, 2002). It can be interpreted as the deputies' position on a left/right spatial dimension. Our test consists of explaining the value of each deputy's congressionally approved amendments that the president chose to execute in the 51st legislature (1999–2002). For the test, we fitted a polynomial equation using the absolute value of the distance of each deputy to the president.[30] This strategy allows for a nonlinear relationship between the distance of each deputy to the president and the value of patronage received through amendments. Thus we can see whether the president distributes benefits based on the ideological distance of the deputy. We are most interested in whether deputies who are slightly further away receive more than those that are very close and very far. For 1999 and 2000 (Cardoso years) the predicted relationship between executed amendments and distance to the president exhibited a pattern where the value of amendments first increased and then decreased as the deputies became more divergent from the president's

29. See footnote 11. We thank Eduardo Leoni for calculating the index for the 51st legislature for us.

30. For this period we did not have the index for the president, so we used the index of the government's leader in the House (Arnaldo Madeira), which was 0.74 on a scale from –1 to 1. This would put the president in the 25th rightmost spot amongst approximately 600 deputies.

Table 3. The Determinants of Cardoso's Execution of Amendments of Deputies, 1998

	Dependent Variable: Executed Amendments, 1998
Constant	−4.822
	(−1.17)
Votes	27.341 ***
	(5.54)
Exec. Amend. 1997	0.106 ***
	(3.15)
Position	−0.458
	(−0.22)
No. Amendments	0.428 *
	(1.61)
Seniority	−0.189
	(−0.22)
No to Yes	11.373 *
	(1.78)
Yes to No	−5.479 *
	(−1.63)
R^2	0.08
N	426

t-Stats in parentheses. Significance: ***1%, **5%, *10%.
Two-stage least squares estimation.
Covariance matrix is White's robust, heteroscedasticity corrected matrix (White, 1980).

preferences (see Figure 4).[31] For 2001 and 2002 we found the same relationship, but the statistical reliability was weak.[32]

Though this test is supportive of our model, we stress that our statistical test controls only for the value of amendments as pork, whereas the president has several other forms of patronage to trade, such as posts in government, as well as instruments to punish deviant behavior. Nevertheless, the results suggest that the "prodigal son" effect may hold.

5. Conclusion

The media in Brazil commonly lament the exchange of pork for policy. Such complaints ignore the counterfactual circumstance that in the absence of exchanging pork for policy the president would accomplish less of his policy

31. The estimated relationships are:

1999 Value Executed = 722,453.14 + 412,215.91 Distance—464,762.25 Distance^2
(5.69) (2.44) (4.64) $R^2 = 0.31$

2000 Value Executed = 854,654.89 + 566,766.21 Dist.—1,252,438.89 Dist.^{2} + 447,512.19 Dist.^{3}
(8.14) (2.00) (2.92) (2.52) $R^2 = 0.35$

(Ordinary least squares. *t*-Stats in parentheses. Includes regional dummies and controls for the number of amendments proposed by each deputy. Value is measured in 1,000 *reais*, data from Jose Antonio M Pires Jr., 2004, "Transferências Voluntárias na Caixa de Edgeworth—Sob a Égide da Lei de Responsabilidade Fiscal," *VIII Prêmio Tesouro Nacional* Brasília, ESAF.)

32. This could be due to the use of other presidential powers, e.g., patronage. We did find very similar results for the earlier, 50th legislature. We chose not to report those results because instead of value of amendments, we have data on only the proportion of the value of approved amendments that were appropriated.

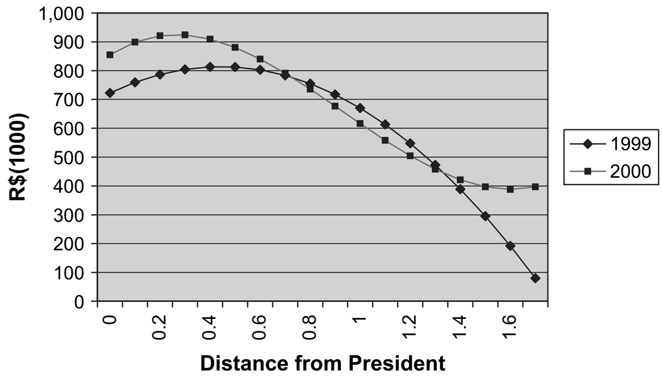

Figure 4. Execution of Individual Budget Amendments.

agenda and policies would be either highly unstable or in gridlock. One could conceive of some other congressional institution, such as strong committees, as stabilizing policy. But, because of differing electoral connections between votes and policies, presidential power as the stabilizing factor has the advantage that the president, more so than members of Congress, should place a higher weight in his utility function on the national interests of economic growth, income equality, economic opportunity, and price stabilization. The concerns of congressmen are more likely more parochial because they are in less of a position to internalize the gains from growth-enhancing policies, whereas they do internalize the benefits from pork. If Congress curtailed the power of the president with the extant congressional institutions in place, we envision even more pork and less prudent developmental policies.

Prior to the new administration of Lula, the institutionally driven exchange model that we present could not be separated from the administration of Cardoso. Fortunately for us the new Lula government has behaved remarkably consistent with our model. After eight years of fierce criticism and opposition to the policies of the Cardoso administration, Lula in his first year in office has proposed objectives very similar to Cardoso, e.g., pension reform and more independence for the Central Bank. Though the proposed policies have surprised some analysts and irritated radicals within Lula's party, Lula's agenda is consistent with the extant incentives derived from the existence of strong presidential powers stipulated in the 1988 Constitution of Brazil.

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