

***Pork Barreling Is Not Credit Claiming or Advertising:  
Campaign Finance and the Sources  
of the Personal Vote in Brazil***

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Although observers of Brazilian politics commonly hold that voters reward incumbents for “bringing home the bacon,” I provide reasons to question the direct link between pork and electoral success as well as statistical evidence demonstrating the lack of such a link. This generates a puzzle: if pork barreling is ineffective, why do Brazilian deputies spend so much time seeking pork? The answer is that deputies do not trade pork for votes, they trade pork for money: pork-barrel success helps incumbents raise funds from private sector interests that profit from government contracts. In turn, politicians’ access to money, not pork, directly affects their electoral prospects. This article provides a new understanding of the electoral connection in Brazil by showing that existing analyses either have overestimated pork’s impact or are underdetermined because they have not included measures of campaign finance. The findings should also encourage comparativists interested in pork-barrel politics, clientelism, the personal vote, and campaign behavior more generally to focus attention on the role of money in elections.

### Introduction

**A**re legislators who gain access to the pork barrel rewarded at the ballot box? Much political science research has attempted to test for a relationship between particularized benefits and electoral success. Some research has suggested a positive answer to this question,<sup>1</sup> although other scholars have questioned the existence of a direct link between pork barreling and election results.<sup>2</sup> Brazil is seen as a paradigmatic case supporting the hypothesis that pork barreling helps

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<sup>1</sup>For the U.S. case, see, for example, Mayhew (1974), Ferejohn (1974), Fiorina (1977), Weingast, Shepsle, and Johnsen (1981), Levitt and Snyder (1997). Outside the U.S., see for example Valenzuela (1977), Ames (1987; 1995; 2001), Cain, Ferejohn and Fiorina (1987), Lancaster and Patterson (1990), McCubbins and Rosenbluth (1995), Lehoucq and Wall (1998), Ward and John (1999).

<sup>2</sup>See, for example, Stein and Bickers (1994), Bickers and Stein (1996), Sellers (1997), Rundquist and Carsey (2000).

incumbents' electoral prospects. For example, Barry Ames (1995, 2001) has argued that Brazil's electoral system generates strong incentives for legislators to seek pork: incumbents run under open-list proportional representation rules where each of Brazil's states serve as at-large electoral districts, with large district magnitudes. Under these rules parties do not rank order their candidates, so in order to win, candidates must compete against their list mates as well as against candidates on other lists. These institutions promote highly individualistic campaign strategies to which incumbents respond by seeking pork to reinforce their personal vote base. Ames has concluded that "politicians, faced with the institutional structure of Brazilian politics, find it necessary and feasible to trade blocs of votes for pork barrel and patronage" (1994, 107–8).

However, Brazil may be a puzzling case for the hypothesis linking pork to electoral success. Although scholars of pork-barrel politics typically assume (either explicitly or implicitly) that incumbents seek pork to win reelection, turnover in Brazil has consistently exceeded 50% in democratic elections. Brazilian incumbents spend a great deal of time attempting to obtain funding for their pet pork-barrel projects, but this high turnover rate seems strange. If turnover is so high, why do Brazilian deputies spend so much time pork barreling? Elsewhere I have shown that part of the answer is that about one-third of incumbents do not seek pork to win reelection, but instead seek pork to help them win a position *outside* of the Chamber of Deputies, such as municipal mayor or state governor (Samuels 2002). These deputies are not interested in a long-term legislative career, and an assumption of *extra*-legislative ambition better explains their pork-barreling strategies compared to a reelection assumption.

Yet this leaves unanswered the question of whether pork barreling is an efficient strategy for the two-thirds of incumbents who *do* choose to run for reelection. Of these, only about two-thirds win on average. Does pork contribute to reelection success, or does this rate of reelection indicate that these deputies may be wasting their time and energy? Deputies are not wasting their time and energy seeking pork, but not because there is a strong relationship between pork and votes. In fact, I will show that there is not. Still, incumbents have a very good reason to seek pork: in contrast to the hypothesis that incumbents trade pork for votes, I argue that Brazilian politicians trade pork for money, in the form of campaign contributions. They then use this money to obtain votes. In short, the relationship between pork barreling and votes in Brazil is indirect, not direct.

This conclusion parallels some scholars' findings for the United States (e.g., Stein and Bickers, 1994) and suggests a particular way to think about the purposes of pork barreling as a part of incumbents' electoral strategies, not just under Brazil's version of open-list PR, but under any electoral system in which individual vote tallies matter (as opposed to closed-list PR, for example). My results suggest that research on pork barreling should not be isolated from research on campaign finance. The findings should encourage similar research in

other countries because although my analysis of the relationship between pork and campaign finance is limited to Brazil, there is no particular reason why the general point should be.

In the next section, I provide theoretical support for the claim that pork barreling in Brazil ought to have an indirect effect on votes rather than a direct effect, whereas money is more likely to have a direct effect. Subsequently, I describe specific hypotheses and subject them to statistical tests. The results of these tests support the theoretically derived hypotheses. In the conclusion, I explore the implications of my results and suggests avenues for additional research.

### Pork Barreling Is Not Credit Claiming or Advertising

Why might pork barreling in Brazil not provide a direct electoral payoff? Every year, Brazilian federal deputies submit thousands of pork-barrel amendments to the budget. These amendments can fund municipal or state-level agencies or projects. Most deputies target municipalities, and various scholars have argued or implied that they do so to bolster their electoral bases for the next election (e.g., Ames 1987, 2001; Avelino Filho 1994; Geddes 1994; Mainwaring 1999; Pereira and Rennó 2000). However, there are several reasons to believe that credit claiming based on access to pork is difficult for incumbent Brazilian federal deputies.

First, although deputies may spend a great deal of time seeking pork, they have no guarantee that their projects will be funded. This is because Brazil's president possesses a line-item veto that allows him to fund any amount between zero and 100% of each amendment. Deputies tend to hedge their bets and submit many relatively low-value amendments rather than a few larger ones in the hope that the president will attend to at least some of their requests. Yet, even if they obtain funding, this means that most projects are relatively small and consequently provide little direct political return. For example, in 1993, the average deputy could "claim credit" for delivering a total of approximately \$256,000 in pork.<sup>3</sup> Given amendments' relatively low value, many voters may be both unaffected by and unaware of the benefits that a deputy delivers. Deputies recognize this: in interviews, they affirm that small project size and presidential control mean that amendments provide little political return. For example, one deputy stated,

"It's fragmented. With a million and a half *Reais*, what could I do? What could any member of Congress do? I could put in half a mile of road [laughs]. A hospital? There's no way I can build a hospital with a million and a half. No one can. A dam? No way . . . I try to attend to the demands of the people the best I can."<sup>4</sup>

<sup>3</sup>Deputies can *submit* several times this amount, but not all the projects they request are funded. Calculated from Brasil, Senado Federal, 1997.

<sup>4</sup>Author interview with Deputy Gonzaga Mota (PMDB-CE), Brasilia, 6/11/97.

Another deputy confirmed that individual credit claiming is difficult because supply is short and the money fragmented into small projects. He stated,

“I got several amendments approved. I helped get a portion of the widening of the BR-101 highway approved, and I got a few other small things approved for some municipalities. But, this provides you with no notoriety, no political return, because the amount is really small, the amendments in reality are very small.”<sup>5</sup>

Pork not only provides an uncertain return because deputies are unsure whether their amendments will be funded and because each project is relatively small. Brazil's open-list electoral system may promote individualistic campaigning, but the electoral system itself also impedes credit claiming for pork-barrel projects. This is because even if their amendments are approved and the president releases the funds, incumbents cannot protect their turf. Under Brazil's electoral system, the states of the federation serve as at-large districts, and thus deputies can receive votes from any part of their state. Although Ames (1995, 2001) has argued that many deputies concentrate their votes in one or a few municipalities within each state, thereby creating a kind of informal district within a district, in fact even those deputies who tend to concentrate their votes also share their bailiwicks with several other candidates. For example, 65% of incumbents elected in 1990 concentrated 20% or more of all their personal votes in their top municipality (Brasil. Tribunal Superior Eleitoral, 1995). However, these deputies rarely dominated the municipality where they obtained the largest portion of their own votes: on average, these deputies obtained only 20% of all the votes in that municipality, meaning that 80% of the votes in that municipality went to other candidates. Thus, even if the municipalities where deputies concentrate their votes are geographically contiguous, most deputies still share voter support in their supposed bailiwick with many other candidates. Deputies normally face competitors from a variety of parties in each municipality where they receive votes, and often each deputy is attempting to claim credit for pork-barrel projects delivered. Brazil's electoral system thus complicates candidates' ability to claim credit for pork.

Not only must incumbents compete among themselves for political credit, but they must also share credit with state-government politicians and local mayors. These politicians often steal deputies' thunder and claim credit for pork-barrel project implementation, even if the money came from the federal budget. This is because technically federal deputies do not *implement* projects. They are known as, and perceive themselves as, *despachantes de luxo*, or luxury errand-boys (and girls), who respond to governors' and mayors' requests. A deputy's job is to expedite contact between government agencies and levels. On the other hand, mayors, governors, and other state-government officers who hold executive-branch positions are explicitly charged with *implementing* pub-

<sup>5</sup> Author interview with Deputy César Souza (PFL-SC), Florianópolis, 4/23/97.

lic works projects within their jurisdictions (Abrucio 1998; Bezerra 1999).<sup>6</sup> These politicians may or may not be political allies of the deputy attempting to claim credit for bringing home the bacon in a particular area.

Given the relatively small value of the pork-barrel projects deputies can personally deliver, and given that incumbents must compete for political credit with other incumbents as well as with state- and municipal-government officials, it is a tricky matter for incumbents to send clear credit-claiming cues to voters in Brazil. Deputies know this and lament that service as a deputy *qua* deputy fails to directly generate significant name recognition. Indeed, a survey taken two years after an election found that only 10.1% of those polled could recall for whom they had voted for federal deputy (Mainwaring 1999, 188n). Brazil's electoral system, which encourages individualistic behavior and allows deputies to seek out votes in any corner of their state, is thus a two-edged sword: candidates can invade others' bailiwicks to strategically seek out votes, but their own bailiwicks are typically scenes of intense competition as well as subject to hostile invasion. In contrast to the Anglo-American single-member district system, Brazil's multimember at-large district system makes voter identification of creditworthy candidates relatively more difficult.

### The Difference between Pork Barreling and Credit Claiming

Generally speaking, the assumption that legislators who bring home the bacon are rewarded at the ballot box ignores the possibility that politicians who obtain similar "amounts" of pork (i.e., public works contracts for equivalent amounts of money) might not be equally capable of both informing voters of their responsibility for obtaining the pork and of convincing voters that they merit reward for their constituency service relative to their competitors. Some politicians are better campaigners, while others might find that somebody else has stolen the stage at the ribbon-cutting ceremony. Politicians may also lack the resources or organizational capacity to inform voters of their pork-barreling acumen.

The distinction between obtaining pork and being recognized for obtaining pork is not merely semantic. Mayhew (1974, 49–61) argued that gaining voters' allegiance involves two distinct processes: working to obtain pork (and/or other constituency service resources) and then claiming credit for the pork. This distinction allows us to imagine a politician successfully masking his or her *limited* pork-barrel success by putting a positive spin on his or her performance. That is, incumbents do not win reelection simply based on the absolute amount of pork they bring home or the number of cases they solve for constituents, but based on the

<sup>6</sup>Deputies' budget amendments may even have been suggested by municipal- or state-level actors.

“perception that they are working hard to bring their constituents the public goods most of interest to them . . . providing more benefits than taxes paid may not be sufficient to ensure reelection, because a challenger could promise even more. Because information about the costs and benefits of government services is highly imperfect for both politicians and voters, politicians have tremendous incentives to focus their energies not only on delivering the pork, but on framing their actions in the most positive light possible” (Stewart 1989, 27).

Constituents make vote choices at least partly based on their assessments of candidates' advertising claims. These decisions can only partly be based on candidates' *actual* success in providing divisible resources. The remainder is based on candidates' capacity to advertise their success relative to other candidates, on voters' ability to sift through a variety of information sources, or on other factors. Candidates know this and spend a good deal of time and money advertising their accomplishments. In short, voter perceptions of candidates' constituency service may depend less on how much service the candidate actually provides and more on whether the candidate successfully provides voters information that puts their performance in a positive light relative to other candidates.

Voters' decisions may be based in part on their perceptions of a candidate's ability to bring home the bacon, a perception that depends less on how much pork the candidate actually generates and more on whether the candidate succeeds in providing information or on generating a positive spin on his or her achievements. If this is the case, pork will be a relatively inefficient resource to generate such information, especially in electoral systems like Brazil's where identification of creditworthy politicians is relatively difficult and where politicians' bailiwicks are ambiguously delineated. For example, a pork-barrel project can provide concentrated benefits, but once a public works project is built, there it stands. It may benefit those who live in the immediate vicinity, but it cannot be paraded about to different constituents. Moreover, if the timing is wrong, voters could forget about the project, or another politician could get more credit for a project completed closer to election time. Moreover, if only a part of a politician's constituency benefits from pork-barrel projects, pork barreling might even result in resentful voters who believe that other constituents benefited relatively more than they did. This might be a problem especially in Brazil, where the at-large electoral districts are in many cases larger than many countries—for example, one of Brazil's medium-sized states, Minas Gerais, is the size of France. In sum, pork's electoral impact in Brazil ought to be muted because voters may not perceive the benefits of the project and because voters may not credit the deputy for obtaining the project.

### How Money Can Help

In the next section I test this proposition statistically. Before doing so, I first discuss how Brazilian politicians seek to overcome this difficulty with money. In contrast to pork, campaign finance is an extremely effective tool for Brazil-

ian politicians to generate the information and spin that promotes their personal vote campaigns.<sup>7</sup> The reason for this is very simple: money is a far more fungible and exclusive political resource than pork. A candidate can attempt to target public works projects to his or her electoral bases, but not to the extent that he or she can target where, when, and how to spend campaign funds. Money can also be employed to win over voters left unaided by public works projects. In addition, a politician spending campaign funds on personnel and advertising materials does not have to share the benefits with other politicians as he or she might have to with a pork-barrel project. Because it is fungible and exclusive, politicians have strong incentives to accumulate money to help their political campaigns.

How do politicians acquire this needed resource in Brazil? Some candidates are already rich, but this is true in any country. In Brazil, for candidates who lack money (or who simply want more), pork barreling brings them into close and repeated contact with the (owners of) private firms that stand to profit directly from obtaining public works contracts (Bezerra 1999; Tendler 1999). Over 90% of all budget amendments are for building roads, bridges, dams, and the like, or for municipal or regional development programs like rural electrification (the remaining 10% are for hospital internments, child welfare programs, etc.).<sup>8</sup> These projects may ultimately benefit voters, but in a diffuse way. However, pork-barrel projects may very directly and immediately benefit the owners of construction firms or local businesses or the landowners and other local notables who stand to profit from the government contracts that pork-barrel projects fund. For example, building a road benefits everybody who might use it in the long run, but it benefits most the firm that will build the road, the transport companies that will benefit from lower transportation costs,

<sup>7</sup>For details on Brazil's campaign finance laws, the sources of campaign finance in Brazil and the campaign finance database, see Samuels (2001a, 2001b, 2001c). One might wonder whether we can trust these data. If the data lack validity, then we cannot learn much about campaign finance in Brazil from them. I recognize that underreporting is likely common. However, as I have shown elsewhere, the data conform to commonsensical expectations regarding cross-candidate, cross-office, and cross-partisan differences. Such patterns could never emerge if the declared contributions were false. Arguing for the utility of similar data from Japan, Cox and Thies (2000, 45) put it this way: "If these data have been fabricated, they have been fabricated so as to preserve a number of expected correlations and even to fit the theories of political scientists—which does not seem too likely."

<sup>8</sup>I was able to categorize 98.6% of the value of all amendments. "Administrative" amendments were not included in this calculation. These amendments subsidize the operations of the judiciary, the postal and telephone services, and the central-government administration. Interviews in Brasilia confirmed that deputies regard these amendments differently from other kinds of amendments. These amendments are inserted into the budget after the president has submitted his initial proposal to Congress, at the request of the president or one of his ministers, to correct deficiencies, adjust to contingencies, or respond to emergencies. The president does not use these kinds of amendments as political carrots and sticks, and relies on a select few deputies to resolve these budgetary problems.

the agribusiness concerns that will benefit from getting their goods to market centers more quickly and cheaply, and local landowners who will benefit from increased value of their land.

There are two excellent indicators that Brazilian deputies care relatively less about the impact of pork-barrel projects on the well-being of their constituents at large than they do about the impact of pork-barrel projects on the well-being of their particular friends in the private sector: they ignore public works projects' constant and rampant cost overruns, and they ignore the literally thousands of unfinished pork-barrel projects that dot the Brazilian countryside (*Folha de São Paulo*, 6/26/96). Deputies are uninterested in seeing projects through to completion; they are more interested in obtaining funding for more new projects because they know that the payoff for a completed project for their career is much less than the payoff for obtaining new contracts.

A quid pro quo to exchange money for contracts with private sector interests is unnecessary. Quite simply, Brazilian politicians have strong incentives to engage in pork barreling: the relationship they establish with the owners of private firms ultimately may be more important to their career success than the actual amount of pork that they deliver to voters because this relationship brings campaign contributions, and the contributions provide the resources that candidates need to advance their campaigns.

The potential importance of private economic interests to deputies' coffers pushes us to rethink the purpose of pork barreling in Brazil. Developing connections to industrialists or landowners can generate a substantial monetary payoff to reelection-minded deputies. This in turn suggests that incumbents seek pork not to benefit directly from additional voter support, but to develop relationships with deep-pocketed potential campaign financiers. In turn, the campaign finance they receive provides direct electoral benefits. In the next section, I empirically test these hypotheses.

### Pork, Money, Votes: Empirical Tests

As argued, there are good theoretical reasons to doubt that pork has a direct impact on votes in Brazil. However, this argument runs counter to the expectations in the case-specific literature. For example, Mainwaring (1999) argued that pork barreling directly affects deputies' votes, and Ames (1995, 427) also concluded that "amendments increase votes." Observers of Brazilian politics have sometimes hinted that pork could have an indirect impact on votes. For example, scholars have long claimed (but never demonstrated empirically) that private sector interests provide campaign finance support to politicians who have helped them obtain government contracts (e.g., Aguiar 1994; Bezerra 1999; Mainwaring 1999). Ames has suggested that pork-barrel projects might "be designed to buy the support of local influentials rather than individual voters" (1995, 416). Nevertheless, when conducting statistical tests Ames did not test



this hypothesis but tested for a direct relationship exists between pork and votes. I will test both hypotheses below.<sup>9</sup>

It should also be noted that Ames (1995, 2001) did not test for pork's *overall* effect on reelection success or on overall vote swing, only on a deputy's vote swing at the municipal level for each municipality where he or she targeted amendments. Yet, because final vote counts are not tallied at the municipal level but at the state level in Brazil and because a deputy who submits pork-barrel amendments to benefit one town may lose votes elsewhere in the state (or may not get as many votes as competitors in the same town who also submitted amendments there), we cannot conclude from Ames' findings that pork barreling helps deputies either gain votes in the aggregate or win reelection.<sup>10</sup>

The literature on pork barreling in Brazil thus suggests two competing hypotheses regarding the relationship between pork barreling and electoral success: pork provides a direct return on votes, or it provides an indirect return on votes by first providing a direct return in terms of campaign finance, which is then responsible for generating a direct return on votes. However, existing research provides little guidance as to which hypothesis provides a better explanation. The analysis that follows clarifies these expectations by showing that pork has only an indirect impact, whereas money plays a crucial direct role in deputies' reelection campaigns. Thus, in the remainder of this section I statistically test three hypotheses:

<sup>9</sup>Pereira and Rennó (2000) also found that pork helps reelection. I suspect that their results are driven by the inclusion in their sample of *suplentes*, substitute deputies who do not win election outright but who take office only when a *titular*, one who does win outright, decides to take a leave of absence, dies, or otherwise leaves the Chamber. This creates serious bias because (all else equal) *suplentes*' chances of winning reelection are on average only about half that of *titulares* and because *suplentes* do not have the same access to pork as *titulares* (because most do not serve the full four-year term and only enter the Chamber when a *titular* leaves). Thus, if one imagines a chart with "probability of reelection" on the Y-axis and "amount of pork obtained" on the X-axis, my argument supposes that the line through the cloud of data has a slope of zero. When *suplentes* are added to the data, it is not surprising that the line ends up with a positive slope, but the result only obtains because *suplentes* have low values on both X and Y relative to the rest of the sample. It is therefore not surprising that Pereira and Rennó find that pork barreling helps reelection, but this result is misleading because of the biased sample.

<sup>10</sup>The other major methodological differences between this approach and Ames's is that Ames tested whether the *number of* a deputy's *submitted* amendments targeting a particular municipality affected his or her subsequent vote totals in that particular municipality, whereas I use the *amount* of funds released for *all* the deputy's amendments. Using the number of amendments supposes that (assuming pork does have an actual impact on votes) a deputy who submits one amendment with a value of \$1 stands to gain the same electoral return as a deputy who submits one amendment with a value of \$1 million. Moreover, using submitted amendments as opposed to actually funded amendments supposes that a deputy who submits an amendment that is ultimately *not* funded for \$1 dollar stands to gain the same electoral return as a deputy who submits an amendment that *is* funded with a value of \$1 million.

TABLE 1  
 Factors Associated with Reelection in Brazil, 1994  
 (Logit Regressions)

Independent Variable	Full Sample		Pro-Government Deputies	
	Coefficient (s.e.)	P >  z	Coefficient (s.e.)	P >  z
Pork	-0.003 (0.002)	.069	-.003 (0.002)	.068
Dominance	-0.014 (0.011)	.201	-.016 (0.011)	.159
Dominance*Pork	0.0001 (0.0001)	.191	.0001 (0.000)	.184
Money	0.040 (0.009)	.000	.035 (0.009)	.000
Money <sup>2</sup>	0.0001 (0.00004)	.001	-.0001 (0.00004)	.002
ListRank	-0.774 (0.713)	.278	-.909 (0.768)	.236
#Terms	-0.099 (0.129)	.441	-.081 (0.136)	.548
Switch	-0.838 (0.413)	.042	-.670 (0.412)	.104
Leader	0.805 (0.773)	.298	.148 (0.859)	.863
ListSwing	0.012 (0.011)	.269	.013 (0.011)	.240
Vote1990	0.0002 (0.00001)	.001	0.0002 (0.00001)	.009
Turnout	0.561 (2.090)	.788	-.718 (2.432)	.768
Constant	-1.916 (.935)	.040	1.288 (1.155)	.265
Log-likelihood	-120.510		-104.968	
N	244		205	
% Predicted Correctly	78.28		76.59	

Dependent Variable: win/lose

*H1: Pork-barrel success does not help incumbents win reelection in Brazil.*

*H2: Money helps incumbents win reelection in Brazil.*

*H3: Pork-barrel success helps incumbents gain access to money in Brazil.*

We can explore the first two hypotheses simultaneously by including variables for both pork-barrel and campaign finance in one regression. Such a model would test my claim that the hypothesis that a direct pork-votes relationship exists in Brazil is mistaken and/or underdetermined. Table 1 presents Logit regression results for a model that tests H1 and H2, in which the dependent variable is whether a deputy who ran for reelection won or not in 1994.<sup>11</sup> I test the model on two different populations: the entire sample, and only those deputies in the government coalition.<sup>12</sup> On the one hand, pork might help any deputy win reelection. On the other hand, some deputies may have more access

<sup>11</sup> Collinearity is not a problem in the following regressions. All results are with robust standard errors.

<sup>12</sup> Deputies in the PT, PDT, PSB and other small leftist parties are excluded from the latter group.

to pork than others, which in turn might allow them to more easily translate pork into votes. The only variable I found that separates deputies who get more pork from those who get less is membership in the government coalition.<sup>13</sup> Testing a direct pork-votes relationship for just the more “clientelistic” deputies follows the conventional wisdom for Brazil, which holds that leftist opposition politicians are much less likely than pro-government politicians to both seek and benefit from pork (see, e.g., Mainwaring 1999; Ames 2001). Still, access to pork or money might help any candidate, so I test for a relationship on both groups. The independent variables in the model are:

- **Pork**, each deputy’s percentage of the total value of all pork-barrel amendments released in his or her district (Brasil, Senado Federal 1997), weighted by district magnitude.<sup>14</sup> I use percentage of pork in the district rather than absolute amounts of pork because we need a measure of deputies’ success relative only to those they are competing against (i.e., those in their state), not against all deputies running for reelection. Hypothesis 1 expects no relationship between pork and reelection.<sup>15</sup>
- **Dominance**, the percentage of all candidate votes that the deputy received in the municipality where he or she received the largest share of his or her own votes in the previous election (Brasil Tribunal Superior Eleitoral 1991, 1995).<sup>16</sup>
- **Dominance \* Pork**, which interacts dominance and pork. Scholars of pork-barrel politics sometimes suggest that pork is more likely to help certain candidates than others (e.g. Stein and Bickers 1994). For Brazil, Ames (2001, 94) hypothesized that deputies who dominate their electoral bases are more likely to benefit from delivering pork, possibly because more voters will take

<sup>13</sup> I tested for the effect of several variables one might suppose would be related to deputies’ relative success in obtaining funding for their amendments, including seniority, previous electoral performance, and list rank, and whether the deputy was on the *Mesa* (Chamber Directorate) or served as a party leader. The only significant variable affecting deputies’ ability to fund pork was membership in the government coalition or not. Within the government coalition, membership in a particular party also did not make a significant difference. These results are available on request from the author.

<sup>14</sup> Leaving the percentage unweighted means that deputies in smaller states will necessarily receive higher percentages, while deputies in larger states will end up with smaller percentages simply because the number of competitors varies depending on state size (the correlation between a deputy’s percentage of the pork and district magnitude is  $-.37$ , for example). Thus, an unweighted percentage regressed on reelection success might measure the relationship between state size and reelection instead of measuring whether pork is associated with reelection; there would be no way to distinguish this effect.

<sup>15</sup> For this analysis I used amendments that were submitted in 1992 and funded in 1993. No data on amendments submitted in 1991 and executed in 1992 were available. No amendments were approved for the 1993 budget (for the 1994 fiscal year) due to a corruption scandal, and the election was held in October 1994.

<sup>16</sup> Because of missing data in the 1990 TSE returns, dominance scores for several deputies could not be calculated, dropping the N to 244. See note 18.

note of this accomplishment.<sup>17</sup> However, I do not expect this variable to be significant.

- **Money**, each deputy's percentage of all campaign finance in his or her district, weighted by district magnitude (Brasil, Tribunal Superior Eleitoral 1997). I expect this variable to be positive and significant.<sup>18</sup>
- **Money<sup>2</sup>** is the deputy's percentage of all campaign finance squared, weighted by district magnitude. It is standard practice in the campaign finance literature to control for the potential that money provides diminishing returns. This variable should return a negative coefficient.

Several control variables are also included:

- **ListRank**, the deputy's rank on his or her list in the previous election, divided by the number of seats the list won. This controls for the possibility that deputies who finish lower on their lists are more vulnerable and thus less likely to win reelection (Brasil, Tribunal Superior Eleitoral 1991). I expect a *negative* coefficient—the lower on the list, the higher the value of the variable since I divide by the number of seats the list won.
- **#Terms** is the total number of terms each incumbent candidate has served. This measures the degree of a candidate's seniority. One might suppose that more senior deputies are less vulnerable, independent of other variables. However, most scholars of Brazil (e.g., Figueiredo and Limongi 1996) do not believe seniority is related to reelection.
- **Switch**, which indicates whether the deputy switched parties during the legislature or not (Brasil, Câmara dos Deputados 1995). This variable tests whether, as scholars have hypothesized, deputies who switch parties are generally weaker candidates for reelection (Schmitt 1999; Desposato N.d.). Thus, I expect a negative coefficient.
- **Leader** indicates whether the deputy served as a member of the *Mesa Diretora*, the Chamber Directorate, or was elected by his or her copartisans as a party floor leader (Brasil, Câmara dos Deputados 1991–1994). This tests whether deputies in leadership positions are less vulnerable.

<sup>17</sup>Stein and Bickers actually suggest the opposite—that more vulnerable incumbents are more likely to benefit from delivering pork. I also tested for an interactive effect between ListRank and Pork as well as Vote1990 and Pork but found no effect.

<sup>18</sup>A total of 348 incumbents ran for reelection in 1994. No candidates (neither winners nor losers) from three states (Alagoas, Mato Grosso do Sul, and Rio de Janeiro) sent campaign finance information, eliminating all candidates running for reelection from those states (N = 51) from the analysis. I have no reason to suspect that leaving those three states out biases the results; those three states are very dissimilar and candidates from those states did not differ substantially from candidates in other states in reelection success (59% versus 62% in the whole sample). I have complete information on 84% of the remaining incumbents running for reelection. The missing data include 21 deputies who won and 26 who lost, indicating that the set of cases is not particularly biased in that, for example, only incumbents who won (or lost) submitted campaign finance information.

- **ListSwing**, the change in the percentage of all votes that the deputy's list won in his or her state from one election to the next. This controls for the performance of each deputy's list. For example, under Brazil's electoral rules, if a deputy's list does better from one election to the next, that increases the deputy's chances of winning reelection, even if the deputy loses votes (Brasil, Tribunal Superior Eleitoral 1991, 1995).
- **Vote1990** is the percentage of the vote in the district each deputy received in the previous election (Brasil, Tribunal Superior Eleitoral 1991). It is standard practice to control for a candidate's performance in the last election.
- **Turnout Change** controls for changes in turnout (Nicolau 1998).
- **Party dummies**. A dummy variable was included for each candidate's party to control for any potential national-level, party-specific effects (Brasil, Tribunal Superior Eleitoral 1995). (The results for the party dummies are not shown.)

The results substantiate both Hypotheses 1 and 2. In neither its direct or interacted operationalization does pork have a positive effect on reelection outcomes. In fact, its sign is in the wrong direction.<sup>19</sup> On the other hand, in contrast to the pork variables, campaign finance is strongly associated with reelection success. Even when we control for "likelihood of benefiting from pork," pork fails to demonstrate a positive relationship with reelection success. That is, the **Dominance \* Pork** variable supposes that pork would have an effect on reelection only for those deputies who are both good "pork barrellers" and who dominate their electoral bases. If more good pork barrellers also dominated their bailiwicks, then this variable might be significant. However, as I described above, the norm in Brazil is bailiwick sharing, which makes credit claiming difficult.

Table 2 presents OLS regression results for a model that contains the same independent variables as above but in which the dependent variable is the deputy's vote swing from 1990 to 1994 (in percent). This model tests the possibility that although pork barreling may not be sufficient to win reelection, it is an important element of a reelection strategy and can help deputies increase their vote totals.

The results in Table 2 reinforce the findings from Table 1: money affects vote totals, but pork barreling has no direct effect on votes (unfortunately, because of the need to weight the variables by district magnitude, there is no way to interpret the coefficients on **Money** in either the Logit or OLS models in real money terms). This latter finding contrasts with Ames' (1995) finding that pork barreling increases votes in the particular municipality where the deputy ob-

<sup>19</sup>The negative coefficient on **Pork** in these and the other regressions is not surprising, as the bivariate correlation between "Win" and "Pork" is  $-.05$ . In other work I have tested the pork-votes relationship in different ways, using different operationalizations of Pork and using the full sample of incumbents for which dominance scores are available (i.e., not including the campaign finance variables). These results confirm pork's lack of impact. See Samuels (forthcoming).

TABLE 2  
Factors Associated with Vote Swing in Brazil, 1994  
(OLS Regressions)

Independent Variable	Full Sample		Government Coalition	
	Coefficient (s.e.)	P >  t	Coefficient (s.e.)	P >  t
Pork	-.015 (.016)	.336	-.014 (.016)	.375
Dominance	-.198 (.089)	.027	-.164 (.089)	.069
Dominance * Pork	.0007 (.0004)	.089	.0007 (.0005)	.139
Money	.458 (.079)	.000	.415 (.081)	.000
Money <sup>2</sup>	-.001 (.0003)	.000	-.001 (.0003)	.000
ListRank	3.595 (7.144)	.615	7.693 (7.197)	.286
#Terms	.413 (1.351)	.760	.822 (1.451)	.572
Switch	.156 (4.143)	.970	-2.139 (3.815)	.576
Leader	13.364 (6.367)	.037	5.813 (5.914)	.327
ListSwing	.390 (.102)	.000	.368 (.099)	.000
Vote90	-.0003 (.0001)	.000	-.0003 (.0001)	.000
Turnout	-205.658 (40.428)	.000	-210.234 (41.802)	.000
Constant	-2.998 (10.948)	.784	-5.289 (9.171)	.565
R <sup>2</sup>	.47		.49	
F	6.98		6.73	
N	244		205	

Dependent Variable: % vote swing

tained funding for an amendment.<sup>20</sup> The results here do not contradict that finding, but they do imply that pork barreling has no *overall* effect on deputies' vote totals.<sup>21</sup>

My results indicate that no direct relationship between pork barreling and overall election success exists in Brazil. However, a clear relationship between money and election success does exist. Scholars have long assumed that campaign finance helps Brazilian politicians win reelection, but no research has measured its impact on reelection success, much less compared its direct impact to the hypothesized direct effect of pork-barrel projects. These findings point to the relative importance of campaign finance to candidates' reelection prospects and the relative unimportance of pork barreling.

<sup>20</sup>On the other hand, the significantly negative coefficient on *Dominance* for the pro-government deputies parallels Ames's (2001, chap. 3) finding that domination is declining across Brazil, that is that dominance is becoming increasingly difficult to maintain.

<sup>21</sup>If one removes *Dominance* from the model but includes the interacted term *Dominance \* Pork*, no relationship is found for either variable ( $\beta = -.00005$ ,  $t = .892$  on *Dominance \* Pork*, and  $\beta = .001$ ,  $t = .936$  on "Pork."). But if one removes the interacted term *Pork* remains insignificant ( $\beta = .001$ ,  $t = .947$ ) while *Dominance* approaches significance ( $\beta = -.115$ ,  $t = .093$ ). This indicates that in the original model, the coefficient on *Dominance \* Pork* is influenced more by *Dominance* than by *Pork*.

These findings confirm the puzzle that I elaborated at the outset. That is, if we did not move forward and test H3, we would be left wondering why reelection-seeking deputies in Brazil seek pork at all, given the absence of a relationship between pork and election success. H3 suggests a way to resolve this puzzle. Tables 1 and 2 confirmed that money is an important factor for deputies' campaigns; H3 suggests that pork-barrel success helps incumbents gain access to that money. Testing this hypothesis involves moving the *Money* variable to the left side of the equation, but keeping *Pork* on the right side.

As noted, the literature on pork barreling in Brazil has suggested that this hypothesis has some validity. Here, I argue that Ames' suggestion that pork-barrel projects might be "designed to buy the support of local influentials" is in fact the correct way to think about pork barreling in Brazil, as opposed to the idea that pork provides a direct payoff in votes. I therefore hypothesize that the more pork a deputy brings home, the more money he or she is likely to raise for the next campaign. To confirm that pork-barrel success helps incumbents gain access to campaign funds, Table 3 presents OLS regression results in which the dependent variable is the percentage of all campaign donations that each incumbent deputy received in his or her state, weighted by district magnitude (the same variable as used in the previous regressions). The following independent variables are included:

- *Pork*, the main variable of interest, is the same as used in the previous regressions: the percentage each deputy received of all pork-barrel amendments in his or her state, weighted by district magnitude. I expect a positive and significant sign on this variable.

TABLE 3  
Pork and Campaign Finance in Brazil, 1994  
(OLS Regressions)

Independent Variable	Full Sample		Pro-Government Deputies	
	Coefficient (s.e.)	P >  t	Coefficient (s.e.)	P >  t
Pork	.079 (.033)	.017	.076 (.033)	.023
Vote1990	.299 (.123)	.016	.347 (.123)	.005
#Terms	-3.151 (2.268)	.166	-4.579 (2.417)	.060
Leader	10.173 (8.209)	.217	14.759 (9.060)	.105
ListRank	-1.987 (12.983)	.879	4.617 (14.539)	.751
Constant	16.495 (13.784)	.233	19.399 (17.735)	.275
F	10.23		3.24	
R <sup>2</sup>	.18		.13	
N	250		211	

Dependent Variable: % Campaign Finance in State

Several control variables are also included:

- **#Terms** is the total number of terms each candidate has served. More senior incumbents might be able to extract large donations, independent of their specific pork-barrel success in the present term.
- **Leader** tests whether legislative leaders are more likely to bring in more campaign contributions.
- **Vote1990** controls for the possibility that electorally stronger candidates might be in a position to receive large donations, independent of their pork-barrel success.
- **Listrank** also controls for the possibility that electorally stronger candidates might be in a position to receive large donations independent of their pork-barrel success.
- **Party dummies** (not shown) controls for the possibility that members of certain parties are more likely to receive campaign contributions than others, given national electoral trends or ideological commitments.

The results confirm Hypothesis 3: pork-barrel success is significantly associated with an incumbent's ability to raise funds to finance his or her campaign, even controlling for the deputy's previous electoral performance. Deputies who "bring home the bacon" may not be necessarily rewarded at the ballot box for their efforts, but they do tend to receive more campaign contributions, and as shown in Tables 1 and 2, these contributions in turn help them win votes and win reelection. This finding solves the puzzle of why, if pork does not provide them with clear electoral benefits, incumbent Brazilian federal deputies spend so much time seeking pork. They do so because of the lucrative payoffs in campaign finance.

## Conclusion

This article clarifies our expectations about Brazilian deputies' electoral strategy under open-list proportional representation (cf. Ames 1995). My argument does not alter the view that most Brazilian politicians engage in highly individualistic and largely nonideological campaign behavior (e.g., Mainwaring 1999) or that Brazilian deputies seek to trade legislative support for pork barrel and patronage (Ames 2001). I agree that most Brazilian politicians must develop and maintain a personal-vote support base to sustain their careers. However, my findings shed new light on the reasons why deputies seek pork and, thus, on the sources of the "personal vote" in Brazil. Previous analyses have either overestimated the importance of pork barreling or have been underdetermined: I found that money, not pork, is the main resource that sustains politicians' efforts to maintain their personal-vote support base among voters. Deputies thus do not deliver pork because it provides a direct electoral payoff—they do so in order to gain the financial support of powerful economic interests. The money that comes from pork barreling helps them win votes.



This conclusion relates well to existing political science research that finds that absolute pork-barreling success may result in different constituent evaluations, given incumbents' relative capabilities to claim credit and advertise their success (e.g., Mayhew 1974; Cain, Ferejohn, and Fiorina 1987; Stewart 1989; Stein and Bickers 1994). In Brazil, absolute pork barreling success also appears to have no direct relationship to electoral success. However, additional research could investigate more deeply the connections between pork barreling, campaign finance, and constituent evaluations of incumbents.

In addition, although pork barreling is commonly understood as an exchange between incumbents and their constituents, my results imply that we can better understand pork barreling in Brazil as an exchange between incumbents and their campaign financiers. This finding also corresponds to work in the U.S. on the relationship between campaign finance and legislative effort (see, e.g., Grier, Munger, and Torrent 1990; Kroszner and Stratmann 1998; McCarty and Rothenberg 1996) as well as Bezerra's (1999) excellent study of Brazilian clientelism. In this reformulation, candidates seek pork not for voters' benefit, but to benefit those whose financial support is necessary either for reelection or for a run for higher office. The incumbent continues to benefit, but it is less clear whether voters ultimately benefit or not.

Finally, the findings here point to a need to conduct additional research on pork barreling and campaign finance in comparative politics. Brazil's electoral rules may particularly limit candidates' ability to use pork to claim credit, but there is no reason why the argument that pork has only an indirect effect on votes should be limited to Brazil. The exchange of government services for campaign support is by no means unusual around the world, yet little research exists outside the U.S. that provides precise empirical confirmation of the relationship between pork and campaign finance, as does this paper. This analysis provides new insight into how Brazil's campaign finance system encourages politicians to tighten their perfectly legal links to firms that thrive on government contracts. Comparativists ought to turn their attention to the details of such important political relationships, investigating how different institutional configurations affect the relative impact of pork and/or campaign finance.

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