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Not All Elections Are Alike: The Institutional Determinants of Political Business  
Cycles

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An abstract of  
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## Abstract

### Not All Elections Are Alike: The Institutional Determinants of Political Business Cycles By Pascael L. Barclay

Since the 1970s, scholars have struggled to resolve the theoretical and empirical debates regarding the existence and nature of political business cycles or PBCs. PBCs occur when incumbents alter fiscal policies around election time to improve their reelection chances. Despite many advancements, scholars still have only a rudimentary understanding of how and if PBCs occur in all dictatorships and across regime types. This thesis undertakes two multivariate tests of PBCs. The first employs a new dataset of 134 dictatorships from 1960 to 2000 and focuses on the effects of electoral characteristics. The second uses a worldwide sample of democracies and autocracies from 1960 to 2000 and concentrates on the effects of party structure and regime type. I find weak evidence of institutions' effects on PBCs in both tests. Nonetheless, these findings provide valuable insight into the general nature of electoral politics in dictatorships and provide evidence that PBCs are not a cross-national phenomenon.

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## 1. INTRODUCTION

Since the 1970s, scholars have struggled to resolve the theoretical and empirical debates regarding the existence and nature of political business cycles (hereafter PBCs). PBCs occur when incumbents alter fiscal policies around election time to improve their reelection chances.<sup>1</sup> The debate surrounding PBCs began with studies by Nordhaus (1975) and Hibbs (1977) that described electorally-driven macroeconomic fluctuations in industrialized democracies. Since these pioneering studies, scholars have made many theoretical improvements (e.g. Drazen 2000; Rogoff 1990) and have expanded the empirical domain to include developing countries (e.g. Remmer 1993; Schuknecht 1996).

Despite these advancements, scholars still have only a rudimentary understanding of how and if PBCs occur in dictatorships. Since the late 20<sup>th</sup> century, many authoritarian regimes have developed some sort of ‘democratic’ institutions, frequently in the form of elections. For example, 70% of all autocracies currently hold some sort of elections (Schedler 2002, 48). Despite the prevalence of these electoral authoritarian (hereafter EA) regimes, few studies analyze how elections and their effects, particularly in regard to PBCs, in these regimes compare to those in democracies.

Several studies analyze PBCs in individual EA regimes (e.g. Blaydes 2006; Magaloni 2006), yet scholars still lack an understanding of the general determinants of PBCs across these dictatorships. Recent scholarship highlights the importance of political institutions in the operations of dictatorships (Bertocchi and

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<sup>1</sup> Some PBC scholarship also includes monetary tools, but for reasons described below, this thesis focuses only on fiscal PBCs.

Spagat 2001; Gandhi and Przeworski 2006), yet we know little about how these institutions affect PBCs. This thesis seeks to understand how the electoral environment affects PBCs. In particular, do PBCs differ in presidential and legislative elections? How does the regularity with which elections are held and the presence of electoral competition affect PBCs? I propose that PBCs will be greater surrounding presidential elections, those that are regularly held, and those in which competition is present. To test these hypotheses, I conduct a multivariate test using a new dataset of 134 EA regimes from 1960-2000. The results show that these electoral characteristics are weak predictors of PBCs in EA regimes.

In addition to analyzing PBCs in EA regimes, this thesis also seeks to understand PBCs *across* regime types. Do elections in authoritarian regimes, even though they are not free and fair, provide the same incentives to engage in PBCs as do democratic elections? Do authoritarians use PBCs to generate support, given that they have many other options, such as repression and electoral fraud, that are not available to democrats? Are there other institutions, namely party structure, that determine PBCs across regime types? I propose that PBCs will be stronger in dominant party regimes and in democracies. Using a worldwide dataset that includes over 2000 elections from 1960-2000, I find weak evidence that institutions significantly affect PBCs across regime types.

Despite these weak findings regarding the institutional determinants of PBCs, this thesis contributes to the existing literature in two ways. First, these findings shed light on the inner workings of electoral politics in dictatorships. From these tests, it is evident that the decision to use repression does not affect the



decision to engage in PBCs. In other words, dictators do not use repression and PBCs as alternative tools to generate support. We also learn that regularly held legislative elections *decrease* government consumption—a counterintuitive finding that requires further study.

Second, the findings of this thesis indicate that generalizations about the findings of several cases should be done with caution. Previous studies found evidence of PBCs in the authoritarian nations of Mexico (e.g. Gonzalez 2002; Hiskey 1999), Egypt (Blaydes 2006), Cameroon (Magloire 1997), and Turkey (Krueger and Turan 1993). However, the cross-national tests provided in this thesis show that PBCs are not, in fact, common to all EA regimes. Therefore, we cannot assume that all EA regimes follow the strategies of Mexico's ruling party or Mubarak's rule in Egypt. Instead, perhaps the PBC behaviors in these regimes are anomalies in the larger population of EA regimes.

## 2. LITERATURE REVIEW

As used in this thesis, a political business cycle is the incumbents' manipulation of the fiscal policy for electoral gains.<sup>2</sup> The early theories of PBCs focus on a tradeoff between unemployment and inflation known as the Phillips curve. At its most basic level, the Phillips curve illustrates the relationship between the rate of money growth (or inflation) and economic activity. When incumbents create PBCs, they manipulate either unemployment or inflation rates to increase

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<sup>2</sup> Traditionally, theories of PBCs involved only monetary policy. However, fiscal policies were also considered as these theories evolved. For reasons discussed below, this thesis focuses on fiscal manipulations.

their vote share. There are two prominent schools of thought regarding PBCs: partisan models and opportunistic models.<sup>3</sup>

The partisan model (Hibbs 1977) contends that variations in inflation and unemployment policy are driven by partisan ideologies, which are determined by the socioeconomic bases of the parties. Hibbs argues that the working class and the upper class have different preferences regarding the tradeoff between inflation and unemployment. The working class prefers policies that generate low levels of unemployment, while those in white-collar jobs prefer low inflation. Thus, the more labor-oriented leftist and socialist parties prefer policies that focus on low levels of unemployment, while more business-oriented conservative parties prefer policies that result in low levels of inflation. Evidence regarding partisan cycles in industrialized countries is mixed (e.g. Alesina 1988; Alesina et al. 1997; Faust and Irons 1999; Mink and de Haan 2006; Sheffrin 1989).

The other model, William Nordhaus' (1975) opportunistic model, also contends that incumbents face tradeoffs between inflation and unemployment rates. Yet, in this model, it is not partisan ideologies that are important, but rather voters' perceptions of incumbents' competence. Nordhaus argues that voters evaluate incumbents' competence in managing the economy based on evaluations of incumbents' past and current performances but have a decaying memory of past events. To increase perceptions of competence, incumbents lower the unemployment rate as elections approach and raise it after the election to combat rising inflation. Nordhaus provides preliminary evidence of this type of PBC in

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<sup>3</sup> See Clark (2003) for a summary of these different models and the differences among them.

several industrialized democracies. Subsequent studies have found mixed results in industrialized countries<sup>4</sup> and in the developing world.<sup>5</sup>

Since their foundation, Hibbs' and Nordhaus' original models have been amended in order to address their respective shortcomings.<sup>6</sup> For example, Rogoff (1990) relaxes Nordhaus' assumption of voter myopia, arguing that this assumption is unfounded and unnecessary to explain the occurrence of PBCs. Despite these changes, the basic ideas remain the same: the partisan model highlights incumbents' policy preferences, whereas according to the opportunistic model, politicians use these fiscal and monetary manipulations to win elections, regardless of their partisan ideologies.

### *2.1 PBCs in EA Regimes*

As stated above, many studies of PBCs in democracies exist, yet few attempts have been made to investigate PBCs in authoritarian nations. To my knowledge, scholars have studied PBCs only in a handful of autocratic nations: Cameroon (Magloire 1997), Egypt (Blaydes 2006), Turkey (Krueger and Turan 1993), and Mexico (Diaz-Cayeros et al. forthcoming; Gonzalez 2002; Grier and Grier 2000; Hiskey 1999; Magaloni 2006; Molinar and Weldon 1994). In general, these studies of PBCs in authoritarian settings find evidence of PBCs, but there is little agreement regarding the main determinants of these cycles and their

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<sup>4</sup> Support for opportunistic PBCs in the US: e.g. Fair (1978, 1982, 1988); Kramer (1971); Tufte (1975); support for opportunistic PBCs in OECD countries: e.g. Lewis-Beck (1988); Madsen (1980); Mink and de Haan (2006); negative findings in the US: e.g. Golden and Poterba (1980); McCallum (1978).

<sup>5</sup> Most studies of the developing world use the opportunistic model, e.g. Block (2002); Remmer (1993); Schuknecht (1996)

<sup>6</sup> See Drazen (2000) for a more detailed description of these amendments.

magnitude. To illustrate this point, I will provide a summary of the literature on PBCs in Mexico.

To begin, Magaloni (2006) presents the most comprehensive analysis of PBCs in Mexico under the PRI (*Partido Revolucionario Institucional* or Institutional Revolutionary Party).<sup>7</sup> Using sub-national level data, she finds that total budgetable, current, and capital expenditures increased prior to elections.<sup>8</sup> She argues that PBCs strengthened as political competition became more intense. However, PBCs occurred even when elections were not competitive. She concludes that PBCs occurred around noncompetitive elections as a way to deter internal splits within the ruling party. She explains, “By winning the elections with huge margins of victory, the PRI attempted to disseminate an image of invincibility that would discourage splits within the ruling party and snowballing effects among the mass public” (2006, 101).

She goes further to identify how exactly PRI dispersed these transfers. She finds substantial differences between the PBCs of the populist governments of 1970s and early 1980s and the neoliberal governments that ruled from 1982-2000. When the PRI followed a populist ideology, money supply, inflation, and nominal wages increased prior to elections; whereas, when it followed a neoliberal strategy, these patterns did not emerge. She also concludes that that PRI followed an ‘entry-deterrence strategy,’ in which it withdrew funds from those districts that voted for the opposition and invested more in those districts that could threaten credibly to

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<sup>7</sup> The PRI ruled Mexico from 1929 until 2000. In 1929, President Plutarco Elias Calles formed the National Revolutionary Party, which later became the PRI. The PRI’s hold on Mexican politics ended in 2000, with the defeat of its presidential candidate, Francisco Labastida Ochoa, by the candidate from the National Alliance Party (PAN), Vicente Fox.

<sup>8</sup> Diaz-Cayeros et al. (forthcoming) echo these findings.

leave the PRI's camp of supporters. These findings complement those of Molinar and Weldon (1994), who find that the PRI targeted funds to districts in which the Cardenistas (the main opposition party) were strong in 1988. However, these findings are contradicted by the findings of Hiskey (1999), who finds that PRI allocated PRONASOL's funds disproportionately to PRI-supportive districts.<sup>9</sup>

Gonzalez (2002) provides another analysis of PBCs in Mexico under the PRI. Unlike Magaloni (2006), this study focuses on the type and timing of increased spending. She finds that increased investments in infrastructure began earlier in the election cycle, arguing that this is necessary for the results of the investments to accrue by election time. In contrast, transfer spending increased as the election approached.

The authors also present contrasting views regarding the effect of competition. Whereas Magaloni finds that political competition strengthens PBCs, Gonzalez argues that increasing levels of democracy can have contradictory effects on PBCs.<sup>10</sup> On one hand, increasing levels of democracy make elections more threatening for incumbents, thereby strengthening their incentives to engage in economic manipulations. On the other hand, increasing levels of democracy also makes the regime more transparent, meaning incumbents' behavior is more apparent to voters, rendering voters more likely to punish incumbents for electoral economic distortions. In the case of Mexico, she argues that "the democratization process...has increased the risk of the government losing power, but has not

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<sup>9</sup> Magaloni argues that her research design is more appropriate to analyze how the PRI targeted spending. Her unit of analysis is locality/year, whereas Hiskey's is region/year. Magaloni argues that this is why Hiskey finds such counterintuitive results.

<sup>10</sup> Gonzalez measures democracy/authoritarianism by Polity's autocracy index and its regulation of participation index and by Freedom House's index of political rights.

increased the country's transparency rapidly enough to reduce the incumbent's temptation to engage in opportunistic policy-making" (2002, 206).<sup>11</sup> In other words, she argues that a lack of transparency makes PBCs a viable strategy, while Magaloni contends that PBCs result as a way to deter splits within the PRI and, thus, occur even when elections are not competitive.

In contrast to this evidence of PBCs in Mexico, inclusion of economic control variables weakens the magnitude of PBCs, as seen in Robin M. Grier and Kevin B. Grier's (2000) study. Contrary to Magaloni's (2006) and Gonzalez' (2000) results, Grier and Grier find that "there is absolutely no sign of any pre-election boom in the data" (2000, 251) when assessing industrial production growth from 1958-1996. However, they do find that industrial production collapsed in the four months following the election. Although the authors rely only on preliminary, descriptive evidence for these variables, they find that patterns in real exchange rate devaluation and government spending also do not fit the predictions of the traditional PBC hypothesis. In fact, there is no evidence of a pre-election surge in real exchange rate growth, but there is a large devaluation in the post-election period.<sup>12</sup> Moreover, spending growth falls after the election, peaks during the midterm, and hovers around zero for the rest of the cycle. While these results cannot be viewed as definitive, they offer a contrasting view of PBCs in Mexico.

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<sup>11</sup> Although this study presents interesting conclusions about the effect of democracy, the results are not robust across democratic indicators. These results are also not robust to different measures of the election variable. When the elections are measured as either pre- or post-election, infrastructure spending increases in the pre-election period; however, when the election variable is disaggregated into quarters, infrastructure spending *decreases* prior to elections.

<sup>12</sup> These findings complement those of Stein & Streb (2004).

In sum, the analyses of PBCs in Mexico come to conflicting conclusions, disagreeing about the type and existence of PBCs and their main determinants. However, all of these studies find some evidence of PBCs in Mexico. Yet the question still remains—are PBCs a cross-national phenomenon, or are they a unique by-product of the PRI's rule? Do dictators in EA regimes outside of Mexico use PBCs to meet their electoral goals? If so, what determines the existence and magnitude of PBCs?

It is quite plausible that the regime's institutions significantly affect PBCs. Since the late 20<sup>th</sup> century, many authoritarian regimes have developed some sort of democratic institutions, frequently in the form of elections. Political and governmental operations in these regimes are often assumed to be nothing more than reflections of the dictators' preferences. However, recent work finds this is not the case, but rather these institutions dramatically affect how the regime operates (e.g. Bertocchi and Spagat 2001; Gandhi and Przeworski 2006). Thus, it is quite plausible that institutions also affect dictators' ability and willingness to engage in PBCs. This thesis focuses on one particular institution—elections—and how the characteristics of these elections—whether they are presidential or legislative, competitive, or regularly held—affects PBCs. Does this nominally democratic institution make autocrats react as democrats do, even though the elections are not free and fair?

Although these dictators may hold elections like democrats, they also have other options not available to democrats, namely the ability to repress. The studies surveyed above do not consider this possibility. However, the ability to repress

likely dramatically changes the dictators' calculus when it comes to PBCs. Should the dictator spend large sums of money on social spending, simply hoping such actions result in a high vote share, or should he simply ensure the political opposition does not make it on the ballot?<sup>13</sup> This thesis assesses the relationship between repression and PBCs.

## *2.2 PBCs across Regime Types*

Above, I have reviewed the existing studies that analyze PBCs in democracies and those that focus exclusively on authoritarian regimes. While these studies provide interesting results, they cannot answer the question of whether there are common determinants of PBCs *across* regime types. To my knowledge, only one study exists that analyzes PBCs across regime types. In this study, Block et al. (2003) compare noncompetitive and competitive presidential elections in Africa. The authors find PBCs surrounding presidential elections in which candidates from more than one party competed.<sup>14</sup> For example, during years in which multiparty elections were held, government consumption increased by 1.5% and the real money supply increased by 13%, but elections had no consistent effect on GDP growth. The authors also find that currency devaluations occurred after these

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<sup>13</sup> I use the male pronoun to refer to dictators because a resounding majority of dictators are/have been men.

<sup>14</sup> They define competitive elections as those in which "candidates from more than one party competed in executive elections." This is from a six point scale introduced by Fere and Singh (2002 in Block et al. 2003). Level 1 means that no executive exists. 2 = executive exists, but was not elected. 3 = executive is elected, but was the sole candidate. 4 = executive is elected and multiple candidates competed for the office. 5 = multiple parties were also able to contest the executive elections. 6 = candidates from more than one party competed in executive elections. Block et al. acknowledge in fn. 9 that one might define competitive if there are elections in which "multiple parties were also able to contest the executive elections," which is a 5 on the scale. However, no countries in their sample fell into this category.



elections. However, the authors find that PBCs do not occur when multiple parties did not compete. They argue, contrary to Magaloni's (2006) findings in Mexico, PBCs will not occur when there is no uncertainty over which party will win the elections (Block et al. 2003, 447).

Although this study presents interesting findings regarding the effects of competition in sub-Saharan Africa, many questions still remain. For example, why did the PRI engage in PBCs even when it did not face competition, yet dictators in sub-Saharan Africa did not? What effects do legislative elections have on PBCs? Do legislators face different incentives to engage in PBCs than do presidents? Does the party system affect PBCs? In other words, is a dominant party like the PRI necessary to effectively engage in PBCs? Beyond electoral competition, does regime type itself affect politicians' incentives to engage in PBCs? Do dictators behave differently than democrats even though both face elections?

### *2.3 Summary*

In sum, there are two prominent models of PBCs—partisan and opportunistic models. Although PBCs have been studied extensively in industrialized democracies, no cross-national test of PBCs in authoritarian countries exists. This thesis includes such a cross-national test of dictatorships and also tests for PBCs in a worldwide sample of all countries from 1960-2000. The results of these tests will enable us to determine whether PBCs are a cross-national phenomenon in dictatorships, or whether they are particular to a few nations, such as Mexico, Egypt, and Cameroon. These results will also provide a greater

understanding of what drives PBCs in general. What effects do institutions have on PBCs? Do all elections, even though they are not free and fair, provide incentives for dictators to engage in PBCs, or do only some types of elections produce PBCs? How do dictators choose between PBCs and repression as tools to generate desired electoral returns? Are there institutions that affect PBCs in both democracies and dictatorships?

### 3. INSTITUTIONAL DETERMINANTS OF PBCs

Before turning to the hypotheses, I will specify the concept of a PBC as employed in this thesis. In this thesis, I employ the logic behind the opportunistic model of PBCs because it can explain PBCs in all countries, not just industrialized democracies. The assumptions of the partisan model do not adequately represent the political climate of developing countries. In these nations, political ideologies do not fit the traditional left-right spectrum found in the West. Schuknecht cautions, “The results for partisan-cycle models crucially depend on left-right ideological polarization with different preferences for inflation and unemployment. This approach is hardly applicable to developing countries where the distinctions between parties do not always exhibit the Western right-left pattern” (1996, 158). Thus, the opportunistic model, which does not rely on this left-right distinction, is better suited to explain PBCs in developing democracies.

Additionally, the opportunistic model can explain PBCs in dictatorships. In these regimes, a party’s place on the left-right ideological spectrum is generally less important than whether the party is pro- or anti-regime. Therefore, a model that

rests on traditional left-right partisan differences is not applicable to these regimes. In addition, dictatorships rarely experience turnover, especially partisan turnover. Therefore, it is unlikely that any PBCs found in these regimes are driven by partisan differences. Thus, the partisan model cannot explain PBCs in these countries. However, the opportunistic model does apply. Rogoff argues, “Even in dominant-party systems, the country’s leaders still generally care about their party’s margin of victory. Its plurality not only affects the leaders’ ability to govern the populace, but also their ability to contain internal dissent within the party” (1990, 34). In other words, even though elections may not result in partisan turnover, dictators engage in PBCs in order to increase their vote share for other reasons.

Although theories of PBCs were originally developed to explain the macroeconomic fluctuations in industrialized economies, they are also applicable when discussing the economic situations of developing countries. In fact, many scholars argue that incumbents in developing countries have greater incentives to engage in PBCs than do politicians in the developed world. For example, Remmer (1993) points out that PBCs should be more prevalent in developing countries since these countries generally have a less sophisticated electorate, a less complex economy, fewer institutional constraints, and a less powerful private sector. Thus, despite the differences between the political-economic climate of developing and developed countries, PBCs should occur in both types of countries. Because this thesis attempts to explain PBCs in all nations, including those in the developing

world and dictatorships, I employ the alternative to the partisan model—the opportunistic model—in this thesis.

This thesis analyzes PBCs in all nations, which includes communist countries and those that do not have fully functioning capitalist systems. Therefore, I restrict this study to fiscal indicators of PBCs rather than including monetary indicators. Whereas the models involving monetary tools assume a well-developed market economy, the use of fiscal policy to improve citizens' economic well-being does not require these assumptions. Additionally, even in industrialized countries, where government operations are more transparent and monetary institutions are stronger, there is not much evidence that incumbents use monetary policy to generate the desired results (Alesina and Roubini 1992; Drazen 2000). This may be due to the fact that monetary manipulations require extensive amounts of information to produce the desired results (Hallerberg 2002).

Increased spending is also the most direct way for incumbents to garner support on election day. Manipulating the economy, via lower inflation for example, can be attributed to other factors, such as the global economy.<sup>15</sup> Additionally, operations in dictatorships are rarely transparent, so voters are less able to discern whether macroeconomic fluctuations are due to incumbent behavior or other outside forces. In contrast, voters know the regime is directly responsible for their increased pensions.<sup>16</sup> For these reasons, this thesis focuses on fiscal PBCs or what some scholars refer to as political budget cycles (e.g. Rogoff 1990; Blaydes 2006).

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<sup>15</sup> For example, trade has a significant impact on inflation and exchange rates (e.g. Aisen and Viegas 2006, Choudri and Khan 2005, Li 2004).

<sup>16</sup> Schuknecht (1996) similarly argues that expenditure policies are more effective in developing countries for this reason.

### *3.1 Hypotheses*

As stated above, politicians use PBCs to generate desired electoral returns, but the effects of political institutions are still unclear. Below, I provide a theory regarding how political institutions affect the presence and magnitude of PBCs. I will first present the hypotheses specific to EA regimes, focusing on various characteristics of the elections themselves. Then, I will put forth hypotheses regarding how party structure and regime type affect PBCs in both autocracies and democracies.

First, regarding EA regimes, I propose that the type of election—presidential or legislative—affects dictators' incentives to engage in PBCs. I expect that governmental spending will increase more during presidential election years than during legislative election years. Following Blaydes' (2008) analysis of Egyptian politics, I argue that the dictator will not disperse government funds for individuals' legislative campaigns because doing so could create dissent within the political elite, thereby destabilizing the dictator's rule. Instead, PBCs surrounding legislative elections must be privately financed so that the dictator does not appear to be showing favoritism. Instead, the "market" decides the winner of the election.

With these self-financed campaigns, the regime's choice of appointments can be seen as responding to the merit of the candidate, i.e. the ability to win the election. Blaydes (2008) argues that the dictator does not want to create conflict within his base, which could potentially destabilize the regime. Therefore, he leaves the financing of campaigns to individuals rather than to the party or to the regime. Blaydes writes, "Those that spend the most on campaigning, therefore, are the ones

that are likely to prevail. The party does not significantly finance these election campaigns...” (2008, 11).

In her analysis of parliamentary elections in Egypt, Blaydes finds that individual politicians relied on non-governmental funds in order to illustrate their competency to the regime, rendering them worthy of receiving the spoils of the office. For example, during the 2000 elections, candidates spent an average of 3-5 million Egyptian pounds on buying votes alone (Boutaleb 2002 in Blaydes 2008), and the individual costs of campaigning rose even higher in 2005 (Blaydes 2008).

Based on this logic, I expect that the regime is unwilling to directly involve itself in legislative races by doling out public funds to help particular legislators, meaning that publicly-funded PBCs should not be as strong during legislative elections. In contrast, we should see PBCs that are financed through private means during legislative election years because politicians are attempting to prove their individual worth to the regime and to gain access to rents. Regarding presidential elections, the dictator does not face this need to allow the “market” to decide the victor. Rather, he can directly alter spending to generate electoral support. Because he holds the bulk of the budgetary powers, he is able to dole out government funds as he deems necessary. Thus:

**H1: Government funded PBCs will be greater surrounding presidential elections than legislative elections.**

The regularity with which elections are held also affects PBCs. When elections are held at regular, constitutionally-mandated intervals, I expect that PBCs will be of greater magnitude. When offering material incentives for votes, politicians face

a compliance problem because there are few guarantees that voters will fulfill their end of the bargain. Although some politicians have developed sophisticated, and often costly, mechanisms, such as requiring voters to make carbon copies of their ballots or to take filled-in ballots into the polls (Schaffer and Schedler 2007), often politicians cannot be sure that PBCs will generate the desired results. For example, in one Taiwanese township in 1993, 45% of those given money did not vote for the candidate who offered the bribe (Wang and Kurzman 2007).<sup>17</sup> Similarly, providing large agricultural subsidies does not necessarily mean that the country's entire population of farmers will vote for the regime.

Despite this problem, one way incumbents can promote compliance is to extend voters' time horizons; if voters fear that non-compliance will exclude them from receiving future payoffs, they will be more likely to comply in the present (Brusco et al. 2004). Holding regular elections is one way to extend voters' time horizons; when voters know that elections will be held every  $x$  number of years, they are able to predict the frequency of payoffs into the future. In other words, regular elections mean that voters must respond positively to the rewards they receive from PBCs in the present election in order to receive these benefits in future elections.

Regular elections also give the regime the ability to show voters that it will fulfill its end of the bargain. Voters have seen the regime use PBCs in the past, and they know that in a constitutionally-set number of years another election will be held. Since the regime has provided these material inducements in the past, the

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<sup>17</sup> This could be the result of the anti-corruption campaign launched by the opposition party rather than a representative picture of the compliance problem, however. Throughout the 1990s, the Democratic Progressive Party (DPP) attempted to discredit the KMT's use of patronage and corruption. The DPP was known to tell voters to accept the KMT's bribe and then not vote for the KMT, but before this campaign vote buying was not considered unethical (Fell 2005).

voters have faith it will provide them in the future. In other words, regular elections enable PBCs to be a mutually beneficial, self-enforcing bargain. Thus:

**H2: PBCs will be greater surrounding regularly held elections.**

The level of political competition is also likely to affect incumbents' decisions to engage in PBCs. For the purposes of this thesis, I identify an election as competitive when voters have the choice to select a party or politician that is not the regime party or affiliated with the regime. When elections are competitive, I expect PBCs to be stronger because voters have the ability to choose a non-regime candidate or party when they go to the polls. Thus, the regime must not only worry about the performance of its own candidates but also about the performance of the opposition. I expect that this competition will force regime politicians to increase spending in order to obtain the desired electoral outcome. Therefore, PBCs will be stronger during competitive elections.<sup>18</sup>

Based on this conceptualization of competitiveness, I identify an election as competitive when there is more than one candidate or party on the ballot. This is an imperfect measure for two reasons. First, under this operationalization, a race that includes a regime-sanctioned "opposition" candidate is considered a competitive election even though the level of competition is minimal. Second, in instances in which the opposition boycotts the elections or refuses to participate, the election is not considered competitive even though the opposition poses at least a minimal threat since it is organized enough to boycott the election. Furthermore, the opposition may not decide to boycott until immediately prior to the election,

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<sup>18</sup> This is a similar prediction to that found in Magaloni (2006). However, this thesis expands the sample on which this hypothesis is tested, uses different dependent variables, and includes different control variables that are applicable to cases outside Mexico.



meaning that the regime's pre-electoral spending efforts were waged when it thought it was facing competition. Despite these problems, this is the only available measure for competition on a cross-national basis. Thus:

**H3: PBCs will be stronger during competitive elections.**

In addition to the particular characteristics found within these EA regimes, the effects of political institutions in all regimes are also of interest. I put forth two hypotheses regarding how the party system and regime type affect PBCs in all regimes. First, the party system significantly affects any country's political environment, thereby influencing incumbents' decisions to engage in PBCs. As discussed earlier, PBCs suffer from a compliance problem in that politicians cannot be sure that increased spending will translate into electoral support.

A high level of organization is one attribute that can help parties overcome this compliance problem. Basedau and Stroh define a highly organized party as one in which "[t]here is an organizational apparatus which is constantly present at all administrative levels and acts in the interest of the party" (2008, 12). A highly organized party, according to Basedau and Stroh, has regular party meetings, congresses, many resources, and can easily identify its members. Because these parties can identify defectors and punish them accordingly, PBCs represent an effective electoral tool to garner political support. Moreover, these parties possess the political resources, including the votes in the legislature, that make PBCs a feasible tool.

Not all parties meet these criteria, but one subset of parties consistently exhibits these characteristics—dominant parties. According to Sartori's widely-cited

definition, a dominant party determines “the system of interaction resulting from inter-party competition,” (1976, 44). In other words, a dominant party controls most of the political resources in a given locality.<sup>19</sup> In order to attain this status of “dominant party,” the party must be highly organized to maintain its position over the opposition and to maintain control over its own members.

One can argue that non-dominant parties in highly-developed democracies are also highly organized. However, these non-dominant parties do not necessarily have the political resources to execute fiscal PBCs because of their non-dominant vote share in the legislature. Moreover, these parties do not have the same incentives as dominant parties to engage in PBCs. Kitschelt and Wilkinson (2007) argue that the types of material inducements offered through PBCs are not a cost-effective way of garnering support for non-dominant parties. They further contend, “Particularly under conditions of high development, where many voters have low regard for [direct material] inducements and thus command a very high price to be bought off, [this type of] linkage may lose its feasibility in the presence of intense competition and an expenditure constraint on politicians” (2007, 29). Thus, because competition with other parties is strong and voters in these highly-developed democracies are not as responsive to material inducements as are the poorer citizens of developing nations, I do not expect non-dominant parties in highly-developed democracies to engage in PBCs.

The situation is reversed in autocracies that do not have dominant parties. In these countries, the regime simply does not have the wherewithal to overcome the

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<sup>19</sup> Note that this control of resources does not preclude competition for office. In many countries, such as Japan and Mexico, dominant party politicians do face significant competition for political office. Therefore, this hypothesis relies on more than simply the level of political competition.

compliance problem. These regimes do not have the organizational capacity to identify, monitor, and punish defectors, thereby making PBCs a very risky and expensive way to generate support.

In sum, I expect to see strong PBCs in dominant party systems. In contrast, non-dominant parties in democracies do not have incentives to engage in PBCs, because their citizens do not desire direct material inducements and because PBCs are not cost-effective. Similarly, autocracies that do not have dominant parties are not able to make PBCs an effective electoral strategy. Thus, I expect the following:

**H4: PBCs will be stronger in dominant party regimes.**

Regime type is another potential determinant of PBCs. Democrats have far fewer tools available to them to attain their desired election results (Schedler 2002). Unlike autocrats, democratic politicians cannot repress the opposition and its supporters, engage in electoral fraud, or limit entry into the electoral race. Because of this limited set of choices, democrats are more likely to turn to increased spending to attain their desired election results. In contrast, autocrats can use other options, such as electoral fraud, that are not plagued by the compliance problem and are thus less risky electoral strategies. Furthermore, as discussed above, autocrats have the ability to control the competitiveness of the election, both by limiting opposition entry into the race and by intimidating the populace into submission. Therefore, when they employ these tools, they have a lesser need to engage in fiscal manipulations in order to attain their desired results. Therefore, I expect that:

**H5: PBCs will be stronger in democracies.**

#### 4. DATA AND METHODOLOGY FOR HYPOTHESES 1-3

Since hypotheses 1-3 refer only to EA regimes and hypotheses 4 and 5 to all regimes, I use different datasets to test these two groups of hypotheses. I will first present the data, methodology, and results for hypotheses 1-3, before turning to hypotheses 4 and 5. To test these hypotheses for EA regimes, I employ a new dataset on elections in authoritarian regimes from 1945-2002 (Gandhi nd). This dataset contains observations from dictatorships that have held an election.<sup>20</sup>

Because I am interested in both electoral and post-electoral effects, I include the year before and after the last authoritarian election even if the country is democratic. If a country became a democracy for ten years or fewer, I keep the democratic years in the sample.<sup>21</sup> If a country experienced democracy for more than ten years, I drop those years from the sample and treat the pre- and post-democracy episodes as two different regimes. For example, Guatemala became a democracy in 1967 and transitioned back to autocracy in 1981 until 1985.

Therefore, the sample includes Guatemala from when it became an autocracy in 1954 until 1967 (because there was an authoritarian election in 1966), and then again from 1981 to 1986 (because there was an authoritarian election in 1985).

The dataset includes 134 countries,<sup>22</sup> 354 authoritarian presidential elections, and 786 authoritarian legislative elections.<sup>23</sup> The number of years each country

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<sup>20</sup> Regime type is a dichotomous measure, in which a country receives a score of 1 if it was a dictatorship on December 31 of that year and a score of 0 otherwise. This measure is from Przeworski et al. (2000) and Cheibub and Gandhi (2004). If a dictatorship held an election but then transitioned to democracy before the end of the year, I recode the regime variable to equal 1.

<sup>21</sup> Most of these episodes last for five years or fewer, only Honduras and Peru had democratic episodes that lasted more than five years but fewer than ten years.

<sup>22</sup> Guatemala, Panama, Ecuador, Turkey, and Pakistan enter the dataset as two separate (or three in the case of Ecuador) regimes due to their prolonged democratic episodes.

<sup>23</sup> The total usable number of country-years is 4487.

appears in the dataset varies widely. Costa Rica is represented in the dataset for the shortest period of time (3 years). Seven countries are in the dataset for 57 years, which is the longest time span.<sup>24</sup> A breakdown of elections by type can be found in table 1.

<b>TABLE 1: Elections in EA Dataset</b>			
	Total Number	Competitive	Regular
Presidential	354	221 (62%)	221 (62%)*
Legislative	786	224 (28.4%)	405 (52%)

\*The regular and competitive presidential elections are not perfectly correlated.

#### *4.1 Dependent Variables*

Previous work on PBCs in authoritarian regimes shows that PBCs operate through both formal and informal channels. For example, Magaloni (2006) notes how the PRI used the National Solidarity Program (PRONASAL) to reward supporters and punish defectors by altering spending on social services. Although social services spending is one possible measure, such data are scarce and problematic in the developing world.<sup>25</sup> However, such attempts to garner support would likely show up in measures of total government expenditures.

Total government expenditures refer to consumption expenditures made by the central government as a percentage of GDP. This measure is also likely to capture other spending that is not included in social services, such as the increased loan capacity offered to Egyptian farmers (Blaydes 2006). To measure the differences

<sup>24</sup> These countries are Paraguay, Iran, Afghanistan, Iraq, Egypt, Liberia, Jordan, and Syria.

<sup>25</sup> For example, GMID's measure of services spending variable does not include social security and welfare spending, and data including social security and welfare are only available starting in 2001.

in spending during election, the first dependent variable is the change in total government expenditures from the previous year. Data for this measure are from *World Development Indicators* (World Bank 2004).

As case studies show, however, not all PBCs in authoritarian regimes occur through official channels. For example, before the 2005 parliamentary elections in Egypt, politicians provided free meals to families in poor neighborhoods; they also passed out items such as shoes and mobile phones and offered to pay voters' phone bills (Blaydes 2006). Similarly, in the 2000 Mexican election, many voters received 250-500 pesos (\$25-50) per vote (Schaffer 2007, 2). Regarding food gifts, the former president of the Federal Electoral Institute, Jose Woldenberg, explained, "Mexico is a very poor country with enormous disparities. For a lot of people, one kilo of sugar or beans is more important than a vote" (in Simpser 2006). In other words, these small consumer goods are greatly valued by the citizens in many of these countries.

Such unofficial gestures are hard to capture quantitatively. However, daily per capita caloric consumption provides a good proxy (Blaydes 2006). Not only does this variable capture the gifts of food that are common in developing nations, but also it is able to capture the indirect effects of other types of gifts, such as paid phone bills or shoes since families are able to use the money they would otherwise spend on these items on much needed food. I use change in daily per capita caloric consumption from the previous year. These data are gathered from the UN's FAOSTAT (2009).

I use this variable as an imperfect proxy for non-governmental electoral spending. Although caloric consumption definitely captures non-governmental electoral spending, such as candidate financed vote buying, it is also affected by governmental spending. For example, when the regime increases pensioners' checks, pensioners will have more disposable income to spend on food, thereby increasing per capita caloric consumption. Regardless, this is the best available proxy for this hard-to-measure informal variant of PBCs, and tests using this variable as a proxy for non-governmental spending can be viewed at least as a first attempt to analyze these different types of spending.

#### *4.2 Independent Variables*

The main independent variables are dichotomous variables indicating whether either presidential or legislative elections were held in a certain year.<sup>26</sup> For example, the presidential election variable receives a score of 1 if an authoritarian presidential election was held in that year.<sup>27</sup> To discover the effect of competitiveness, I recode the election variables so that they take on values of 1 only when there were at least two contenders in the election. These data are from Gandhi (nd).

Additionally, to code regular elections, I used Nohlen's elections handbooks (1999, 2001, 2005) to identify whether an electoral law was in place that dictated

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<sup>26</sup> I use the first differences only to capture change in the dependent variable, not to distinguish between short- and long-term effects (Fransze 2002). Therefore, I do not first difference the independent variables, but I do use lagged values when appropriate.

<sup>27</sup> If an election was held in January, February, or March, I recode the election variable so that it takes a value of one in the previous year. For example, were an election to have been held in January, 1983, the election variable would equal one in 1982 and zero in 1983.

the timing of elections. If such a law existed and election timing followed that law, the elections are coded as being regular. For example, the 1917 Mexican Constitution dictates that the presidential elections are to be held every six years. Since the elections follow this pattern, Mexican presidential elections are coded as regular.

Many other studies of PBCs in the developing world (e.g. Blaydes 2006; Block 2002; Remmer 1993) do not include control variables. However, there are a few variables that undoubtedly affect spending decisions. I include three such control variables that affect a regime's ability to engage in PBC-type behavior. The first is the logged value of per capita GDP, which I include as a proxy of the general level of development.<sup>28</sup> Existing scholarship (e.g. Nichter 2008; Stokes 2006) argues that poor voters are more responsive to material rewards, thereby making PBCs a more attractive and effective electoral strategy for incumbents. Thus, I expect as GDP per capita increases, PBCs should not be as prevalent. Data for this variable are from WDI (World Bank 2004).

The second control variable is whether the country is under an agreement with the International Monetary Fund (IMF) during a certain year (Vreeland 2007). Since the IMF places restrictions on macroeconomic and fiscal policy (Sisson 1986), I expect that dictators in these countries have a lesser ability to engage in PBCs, particularly those behaviors that occur through formal channels, such as total government consumption. I do not include the IMF variable in the caloric consumption models since there is little theoretical reason why IMF agreements should affect caloric consumption.

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<sup>28</sup> I use the logged value, since GDP per capita is highly skewed.



I also include the use of repression as a control variable because the competitiveness of the election is not completely exogenous to the regime's strategy. In fact, a non-competitive election may be a reflection that the regime has used other tools from its 'menu of manipulation' (Schedler 2002) to ensure that opposition candidates do not appear on the ballot. Because the regime has these alternatives, namely the ability to repress, it need not spend as many resources on PBCs. Instead, the regime is able to use repression both to keep opposition candidates off the ballot and to intimidate the populace into supporting the regime at the polls. Therefore, the use of repression has already moved the regime closer to its desired results, meaning that it need not resort to PBCs as much to attain its goals. In general, the more a regime uses repression before an election, the less it needs to engage in PBCs during the election period.

To measure repression, I employ data from Cignarelli and Richards' dataset on human rights violations (2008). I use the physical integrity index, which is an additive index of torture, extrajudicial killings, political imprisonment, and disappearance indicators.<sup>29</sup> The index has a minimum value of 0, which means that the government engages excessively in these activities, and a maximum of 8, which

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<sup>29</sup> Torture is "the purposeful inflicting of extreme pain, whether mental or physical, by government officials or by private individuals at the instigation of government officials. Torture includes the use of physical and other force by police and prison guards that is cruel, inhuman, or degrading. This also includes deaths in custody due to negligence by government officials." Extrajudicial killings are "killings by government officials without due process of law. They include murders by private groups *if* instigated by government. These killings may result from the deliberate, illegal, and excessive use of lethal force by the police, security forces, or other agents of the state whether against criminal suspects, detainees, prisoners, or others." Political imprisonment refers to "the incarceration of people by government officials because of: their speech; their non-violent opposition to government policies or leaders; their religious beliefs; their non-violent religious practices including proselytizing; or their membership in a group, including an ethnic or racial group." Disappearances refers to "cases in which people have disappeared, political motivation appears likely, and the victims have not been found." For each of these, a score of 0 means that this type of action occurred frequently in a given year. 1 means it occurred occasionally, and 2 means it did not occur.

means that the government does not partake in these activities. I used a lagged value of this variable, since my hypothesis predicts that prior use of repression will affect spending on PBCs.

Summary statistics are provided in table 2.

	Min	Max	Mean	Std Dev
Consumption expenditures (first difference)	-38.6	37.5	0.05	3.0
Daily per capita caloric consumption (first difference)	-181.1	168	6.9	67.2
Per capita GDP	5.1	11.1	7.7	0.88
IMF	0	1	0.28	0.45
Absence of Repression	0	8	3.9	2.2

### 4.3 Methodology

To ascertain the presence of PBCs in EA regimes, I assess the impact of presidential and legislative elections on government expenditures and caloric consumption.<sup>30</sup> When total government consumption is the dependent variable, the models are plagued by heteroskedasticity. Therefore, I use OLS with robust standard errors. When caloric consumption is the dependent variable, serial correlation is also present. Therefore, I use OLS with robust standard errors and a lagged dependent variable.

## 5. RESULTS FOR HYPOTHESES 1-3

As seen in table 3, only twice do authoritarian elections have a significant effect on total government consumption. During legislative election years, total

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<sup>30</sup> Despite the number of elections variables in these models, multicollinearity is not a problem. The highest VIF is less than 5 in the consumption models and less than 15 in the caloric consumption models.

government consumption increases by .85%. This would mean an increase of \$1.43 billion for a country similar to Vietnam in 2001, which falls just below the median of the country-years in the dataset.<sup>31</sup> However, it should be noted that this finding is significant at only the .10 level. The second statistically significant finding is contrary to hypothesis 2; total government consumption *decreases* by 1.3% during years in which a regularly held election was held.

**TABLE 3: Results: Electoral Authoritarian Regimes**

		Gov. Consumption	Calories
Independent Vars.	Pres. election	.02 (.44)	-3.9 (33.7)
	Regular pres. election	-.64 (.69)	-8.8 (15.7)
	Competitive pres. election	.73 (.69)	9.5 (38.7)
	Leg. election	.85 (.47)*	-2.3 (11.7)
	Regular leg. election	-1.3 (.51)**	-6.7 (14.0)
	Competitive leg. election	.59 (.50)	14.7 (13.0)
	Absence of repression (lagged)	-.00 (.05)	-.73 (1.3)
	logGDP per capita	-.03 (.11)	3.3 (3.1)
	IMF	-.11 (.17)	-
	Lagged DV	-	-.01 (.01)
Constant		.08 (.85)	10.2 (19.4)
N		1080	577

\* denotes significance at the .1 level, \*\* at the .05 level

These results show little support for hypothesis 1—that government funded PBCs will be greater during presidential elections. The coefficients for legislative elections' effects on total government consumption are just as large as those for presidential elections'. In fact, presidential elections do not significantly affect government consumption, but, opposite hypothesis 1, legislative elections have a significant, positive impact on government consumption. Hypothesis 3 is also not supported; competitive elections do not have a significant impact on either

<sup>31</sup> The GDP of Vietnam in 2001 was \$168 billion (CIA World Factbook 2002).

dependent variable. Contrary to Blaydes' (2006) findings in Egypt, a worldwide sample of EA regimes shows that elections do not significantly affect per capita caloric consumption.

None of the control variables are statistically significant. The level of development and participation in an IMF agreement are not significant predictors of PBCs in EA regimes. Interestingly, the use of repression in the previous year also does not affect PBCs. In other words, the use of repression does not significantly affect a dictator's decision to engage in PBCs, meaning that studies that do not include repression in their analysis of PBCs in EA regimes do not suffer from omitted variable bias.

### *5.1 Robustness Checks*

Recalling Grier and Grier's (2002) findings in Mexico, perhaps PBCs in EA regimes are not visible in the year of an election, but rather can be seen in devaluations after election years. To test this, I replace the election year variables with variables indicating the year after an election.<sup>32</sup> I estimate this model using OLS, correcting for heteroskedasticity, and, when caloric consumption is the dependent variable, including a lagged dependent variable to deal with autocorrelation. Despite Grier and Grier's (2002) findings, this does not seem to be a pattern found generally in EA regimes; there are no significant devaluations in the years following elections. These results are presented below in table 4.

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<sup>32</sup> These post-election variables reflect the changes made for the election variables explained in fn. 27.

<b>TABLE 4: Robustness Check: EA Regimes- Post-Election Year Effects</b>			
		Gov. Consumption	Calories
Independent Vars.	Year after pres. election	-.46 (.45)	21.8 (17.5)
	Year after reg. pres. elec.	.79 (.60)	3.8 (12.8)
	Year after comp. pres. elec.	-.59 (.57)	-22.6 (18.8)
	Year after leg. election	-.43 (.38)	6.8 (12.8)
	Year after reg. leg. elec.	.22 (.40)	1.6 (14.1)
	Year after comp. leg. elec.	-.18 (.47)	-6.8 (12.1)
	Absence of repression (lagged)	-.01 (.05)	-.80 (1.3)
	logGDP per capita	-.00 (.12)	3.5 (3.1)
	IMF	-.08 (.17)	-
	Lagged DV	-	-.01 (.01)
Constant		.12 (.85)	-.01 (.01)
N		1080	580

\* denotes significance at the .1 level, \*\* at the .05 level

These results change only slightly when the variables for the election and post-election years are included in the same regression. None of the explanatory or control variables are significant, with the exception of regular legislative elections when government consumption is the dependent variable. During years in which a regular legislative election is held, government consumption decreases by 1.4%.<sup>33</sup>

I also assess the impact of elections when control variables are not included. This follows much of the existing literature on PBCs in authoritarian regimes (e.g. Blaydes 2006). I estimate this model using OLS, correcting for heteroskedasticity, and, when caloric consumption is the dependent variable, including a lagged dependent variable to deal with autocorrelation. Presented in table 5, these results generate the same conclusions reached above. Government consumption increases during legislative election years but decreases during regularly held legislative election years. When I remove the control variables in the post-election year models, the results are also similar to those presented above.<sup>34</sup>

<sup>33</sup> Multicollinearity is not a problem, with no VIF exceeding 5 when government consumption is the dependent variable and not exceeding 15 when caloric consumption is the dependent variable.

<sup>34</sup> Including the value of the use of repression during the election year rather than a lagged value also does not significantly alter the results.

<b>TABLE 5: Robustness Check: EA Regimes- No Control Variables</b>			
		Gov. Consumption	Calories
Independent Vars.	Pres. election	-.61 (.42)	-6.6 (32.8)
	Regular pres. election	.50 (.49)	-2.1 (15.5)
	Competitive pres. election	.46 (.51)	10.6 (35.7)
	Leg. election	.53 (.28)*	-1.2 (11.0)
	Regular leg. election	-.81 (.37)**	9.4 (13.7)
	Competitive leg. election	.17 (.32)	-1.6 (13.1)
	Lagged DV	-	-.00 (.01)
Constant		.01 (.06)	15.0 (14.1)
N		2628	717

\* denotes significance at the .1 level, \*\* at the .05 level

## 6. DATA AND METHODOLOGY FOR HYPOTHESES 4 AND 5

### 6.1 *Dependent Variables*

To test hypotheses 4 and 5, I use a dataset of all countries from 1945-2000. The dependent variables are the same as in the previous section: change in total government consumption as a percentage of GDP from the previous year (World Bank 2004) and change in daily per capita caloric consumption from the previous year (UN's FAOSTAT 2009).

### 6.2 *Independent Variables*

The main independent variables are interaction terms comprised of the variables discussed below. Using a dataset compiled by Jennifer Gandhi (nd), I use two election variables. There is a variable indicating whether a presidential election took place and one indicating whether a legislative election was held. In the dataset, there are 593 years in which a presidential election was held and 1593 years in which a legislative election occurred.

Regime type is a dichotomous measure, in which a country receives a score of 2 if it was a dictatorship on December 31 of that year and a score of 1 otherwise (Przeworski et al. 2000; Cheibub and Gandhi 2004).<sup>35</sup> The variable *dominant party* equals 1 when there is a dominant party present (Reuter 2009). In autocracies, this party can either be a traditional hegemonic party or a single party dictatorship.<sup>36</sup> In democracies, only seven dominant parties have existed during the post-War period: Italy under Christian Democracy (DC) (1946–1992), Japan under the Liberal Democratic Party (LDP) (1955–93), India under Congress Party (1952–77), Bahamas under the Progressive Liberal Party (PLP) (1967–92), Luxembourg under the Christian Social Party (PCS) (1980–), Sweden under the Social Democratic Party (SAP) (1936–76), and Israel under the Mapai/Labor Alignment (1949–77) (Reuter 2009).

I control for the level of economic development because it affects both the resources incumbents can use to engage in PBCs and how much voters will respond to material inducements. Previous studies argue that the poor are more receptive to material incentives (e.g. Nichter 2008; Stokes 2005), rendering PBCs an attractive electoral tool. Thus, as the level of economic development declines, we should see an increase in the proffering of material goods for voters, i.e. an increase in the magnitude of PBCs. To measure the level of development, I include the logged value of GDP per capita (World Bank 2004).<sup>37</sup>

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<sup>35</sup> I recoded this variable so as to distinguish to between years in which a democratic election was held and those years in which no election at all was held. If I did not recode this as such, both types of occurrences would have the value of 0 in the interaction term of regime type and election year. With *regime* recoded as written above, the interaction term equals 0 if no election was held, 1 if a democratic election was held, and 2 if an authoritarian election was held.

<sup>36</sup> A hegemonic party regime holds multi-party elections, and a single party regime does not.

<sup>37</sup> I use the logged value because this variable is highly skewed.

Because I am interested in how the above variables interact with elections to create incentives to generate PBCs, I include three interaction terms in the model by interacting the variables for dominant party, per capita GDP, and regime type with the various election variables.

I also control for IMF agreements when total government consumption is the dependent variable. 1835 country-years, or roughly 24% of the country-years, are under an IMF agreement. Summary statistics are provided in table 6.

<b>TABLE 6: Summary Statistics for All Regimes Data</b>				
	Minimum	Maximum	Mean	Std. Dev.
Change in consump. expenditures	-38.6	37.5	0.05	3.0
Change in caloric consump.	-181.1	168	6.9	67.2
	Number	Out of	%	
Dictatorships	4595	7868	58%	
Dominant Parties	2537	8712	30%	
IMF agreements	1835	7490	24%	

### 6.3 Methodology

To test these hypotheses, I use OLS with robust standard errors to deal with heteroskedasticity.<sup>38</sup> Due to high levels of multicollinearity among the election variables,<sup>39</sup> I run two separate models: one for presidential elections and one for legislative elections.

<sup>38</sup> Unlike the EA sample, serial correlation is not a problem when caloric consumption is the dependent variable, as revealed by the Stata command *xtserial* (Drukker 2003).

<sup>39</sup> VIFs exceeding 120.



## 7. RESULTS FOR HYPOTHESES 4 AND 5

As presented in tables 7 and 8, there is little evidence of PBCs across regime types. Only twice is an interaction term statistically significant, and then only at the .10 level. First, citizens ruled by a dominant party consume an additional 5,256 calories in legislative election years. This is consistent with hypothesis 4. Second, total government consumption and the interaction term of presidential elections and regime type are negatively related. This lends some support for hypothesis 5—that democracies will exhibit greater PBCs than dictatorships. Although not always significant, the coefficient of the interaction term between election and regime type is negative for both dependent variables, indicating that dictatorships spend less than democracies during election years. Additionally, the results also show that, unsurprisingly, citizens of richer countries consume more calories and that countries under an IMF agreement have lower levels of government consumption.

		Gov. Consumption	Calories
Independent Vars.	Dom. Party*elec	.41 (.43)	7.5 (10.4)
	LogGDP/c * elec	-.19 (.19)	-.42 (4.1)
	Regime*elec	-.78 (.46)*	-.14 (11.0)
	Dom. Party	.04 (.10)	4.5 (2.9)
	LogGDP/c	.02 (.05)	2.4 (1.4)*
	Regime type	.03 (.12)	.23 (3.3)
	Election	2.0 (1.8)	-2.0 (35.4)
	IMF	-.31 (.08)**	-
	Constant	-.04 (.51)	-11.0 (12.7)
N	4595	4886	

\* denotes significance at the .1 level, \*\* at the .05 level

TABLE 8- Results: All Regimes- Legislative Elections			
		Gov. Consumption	Calories
Independent Vars.	Dom. Party*elec	.10 (.28)	14.4 (7.7)*
	LogGDP/c * elec	-.16 (.13)	-1.2 (3.9)
	Regime*elec	-.37 (.33)	-10.0 (10.2)
	Dom. Party	.05 (.10)	2.4 (3.1)
	LogGDP/c	.03 (.06)	2.7 (1.4)*
	Regime type	.05 (.12)	2.1 (3.3)
	Election	1.6 (1.2)	9.1 (34.5)
	IMF	-.31 (.08)**	-
Constant		-.14 (.54)	-14.0 (12.5)
N		4595	4886

\* denotes significance at the .1 level, \*\* at the .05 level

### 7.1 Robustness Checks

To assess the robustness of these results, I perform several additional tests. First, instead of testing the effects of presidential and legislative elections separately, I use a variable that indicates whether there was *either* a presidential or a legislative election in that year.<sup>40</sup> The results, presented in table 9 below, show that this change does not alter the findings; the interaction terms are still not significant at the .05 level.

TABLE 9- Robustness Check: All Regimes- All Elections			
		Gov. Consumption	Calories
Independent Vars.	Dom. Party*elec	.18 (.25)	8.3 (6.4)
	LogGDP/c * elec	-.15 (.12)	-.48 (2.8)
	Regime*elec	-.43 (.30)	-5.6 (7.6)
	Dom. Party	.02 (.10)	2.8 (3.1)
	LogGDP/c	.03 (.06)	2.8 (1.4)**
	Regime type	.07 (.13)	1.8 (3.3)
	Election	2.0 (1.4)	10.3 (30.7)
	IMF	-.31 (.08)**	-
Constant		-.15 (.54)	-14.6 (12.7)
N		4595	5203

\* denotes significance at the .1 level, \*\* at the .05 level

<sup>40</sup> This variable takes on a value of 1 even if there were both types of elections in a given year. The method is the same as above—OLS with robust standard errors.

Second, I test for devaluations in the post-election period.<sup>41</sup> None of the interaction terms are significant regardless of the type of election. I only present the results of the model that includes either type of election, but the results of the models including only legislative or presidential elections are similar to those presented in table 10.

**TABLE 10- Robustness Check: All Regimes-Post-Election Year Effects**

		Gov. Consumption	Calories
Independent Vars.	Dom. Party*elec	.20 (.53)	-22.0 (22.6)
	LogGDP/c * elec	.00 (.12)	-2.9 (3.1)
	Regime*elec	-.11 (.27)	-10.9 (7.2)
	Dom. Party	-.81 (.46)*	28.9 (14.5)**
	LogGDP/c	.04 (.10)	3.5 (2.6)
	Regime type	.09 (.21)	5.3 (5.6)
	Election	.02 (1.1)	27.2 (28.0)
	IMF	-.18 (.09)*	-
Constant		-.23 (.92)	-21.9 (23.6)
N		3125	3578

\* denotes significance at the .1 level, \*\* at the .05 level

Third, following previous studies, I discard all control variables and interaction terms, including only the election variable in the regression.<sup>42</sup> Even with such a minimal model, only twice do elections exert statistically significant effects on the dependent variables. Government consumption increases by .15% during years in which there is either type of election. Additionally, legislative elections exhibit a statistically significant (at the .10 level) and positive effect on government consumption. Elections do not have significant effects on caloric consumption. These results are presented below in table 11.

<sup>41</sup> I use OLS with robust standard errors.

<sup>42</sup> I use OLS with robust standard errors.

<b>TABLE 11- Robustness Check: All Regimes- No Control Variables</b>						
	Gov. Consump.			Calories		
Independent Vars. Any elec.	.15 (.07)**	-	-	.13 (2.3)	-	-
Pres. Elec.	-	.13 (.13)	-	-	-3.2 (3.8)	-
Leg. Elec.	-	-	.17 (.09)*	-	-	-1.3 (2.7)
Constant	.03 (.04)	.06 (.04)	.03 (.04)	11.1 (1.2)**	11.0 (1.1)**	11.0 (1.2)**
N	5124	4823	4823	5710	5379	5379
* denotes significance at the .1 level, ** at the .05 level						

## 8. CONCLUSION

Based on the above results, this thesis generates three general conclusions regarding PBCs. First, in dictatorships, the decision to use repression does not seem to inform the decision to engage in PBCs. In other words, repression and PBCs are not alternative tools to garner electoral support. These findings provide insight into how dictators choose from the items on their “menu of manipulation” (Schedler 2002) in order to generate desired results.

Second, government consumption decreases during years in which a regularly held election takes place. This contrary to my hypothesis; I predicted that the regularity of elections overcomes the compliance problem by making PBCs a mutually beneficial, self-enforcing bargain. Thus, PBCs are a rewarding electoral strategy for both voters and politicians. One possible explanation for this seemingly counterintuitive finding expands on the problem with compliance. Despite the elongated time horizons, the regime may still be skeptical that the voters will come through on their end of the bargain. This uncertainty is worrisome, given the high stakes of an unsuccessful electoral strategy. Thus, the regime withholds the promised money until after the election results are known.

Additionally, in order to avoid the negative consequences of overspending, politicians withhold funds in the election year in order to finance the post-election surge. Thus, we should see significant devaluations in election years, followed by an increase in the year after an election. Despite this seemingly plausible explanation, it should be noted that the data did not reveal a post-election surge. Nonetheless, this interesting finding remains a question for future research.

Third, it seems that institutions' effects on PBCs are rather weak. The results do not consistently show that countries ruled by dominant parties have stronger PBCs, nor do they show that democracies spend more than dictatorships around election time. Similarly, the particular characteristics of elections in authoritarian regimes—presidential or legislative, competitive, and regular<sup>43</sup>—also do not have a consistent, statistically significant effect on PBCs. From these results, one may conclude simply that institutions are not significant predictors of PBCs. This conclusion supports one of the major conclusions of Kitschelt and Wilkinson's (2007) study of the linkages between politicians and voters in democracies. These authors argue that formal political institutions do not have significant effects on how politicians reach out to their constituents because politicians simply work around these formal institutions to give their constituents the desired type of benefits or policies. In other words, other characteristics, namely the interaction between economic modernization, political economy, party competition, and ethnic heterogeneity, are much more important than institutions in determining linkages between voters and politicians.

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<sup>43</sup> With the exception of regular legislative elections' effects on government consumption

Additionally, if Kitschelt and Wilkinson (2007) are correct in their assessment of institutions' effects in democracies, then it is even less surprising that institutions do not exhibit significant effects in dictatorships. Although recent scholarship argues that institutions in dictatorships dramatically affect how the regime operates (e.g. Bertocchi and Spagat 2001; Gandhi and Przeworski 2006), it is possible that dictators are willing to navigate around or ignore institutional constraints when it comes to their political survival. In dictatorships, it is unclear whether the incumbent will actually step down if defeated at the polls (Przeworski et al. 2000), especially considering they have many tools at their disposal, such as electoral fraud and repression, to ensure an electoral victory (Schedler 2002). Because of these additional tools, they may be willing to hedge their bets in the run-up to the election by not spending as much to induce a favorable outcome. Therefore, since dictators have many extra-institutional tools to attain their desired ends, formal political institutions are not significant determinants of PBCs. Additionally, much of the political struggle in dictatorships often occurs within the ruling elite itself. In this case, it is not the election, where the regime is pitted against non-regime candidates and parties, that causes an increase in spending, but rather internal power struggles among the elite that affect incumbent behavior.<sup>44</sup> If these internal power struggles are what drive increased spending, then formal institutions, such as the type of election, should have little effect on PBCs.

Although some argue that institutions simply are not significant predictors of PBCs, it is also possible that these weak findings are a result of the data used. In this thesis, the unit of observation is country-year. Changing this research design

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<sup>44</sup> I thank Hubert Tworzecki for pointing this out.

slightly may provide a more exact picture of PBCs, thereby allowing us to ascertain institutions' effects more accurately. First, one might undertake cross-national study that used monthly or quarterly, rather than yearly, data. With this type of data, one could more easily track fluctuations in spending due to elections. For example, my findings show that elections rarely have an effect on caloric consumption. Were monthly or quarterly data available, it might be easier to see how elections affected caloric consumption. For example, if an incumbent provided free meals in a poor district every night for a month, each person would consume around an extra 15,000 calories in the month before the election.<sup>45</sup> However, when using yearly data, it would seem that per capita caloric consumption only increased by about 41 calories per day. These smaller fluctuations may underestimate elections' effects on spending.

Second, one might also use local or regional data rather than data at the national level. It is possible that politicians view increased spending on an entire country as inefficient when they could just target their spending efforts on those districts in which they desperately need to increase their vote share. In other words, perhaps the PRI's 'entry-deterrence' strategy, withdrawing funds from opposition strongholds and spending more on highly competitive districts (Magaloni 2006), is something that is common outside of Mexico. If this is the case, then the net aggregate spending around election time is zero, since politicians just change the location of where the money is spent rather than increasing the overall value. This might account for the dearth of evidence of PBCs found in this thesis.

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<sup>45</sup> Assuming that the meal contained about 500 calories and there are 30 days in a month.

Although these two changes may seem minor, finding data to accompany these changes is a paramount task. To my knowledge, such data do not exist in an easily obtainable format and would be incredibly difficult to acquire. Still yet, collecting and analyzing these data would provide valuable insights into PBCs within autocracies and across regime types. In particular, it would help resolve the question of whether PBCs are a cross-national phenomenon in dictatorships or are merely a feature of a few idiosyncratic EA regimes, such as Mexico and Egypt.



## Bibliography

- Aisen, Ari and Francisco Jose Viega. 2006. "Policy Instability and Inflation Volatility." *IMF Working Paper* 06/212.
- Alesina, Alberto. 1988. "Macroeconomics and Politics." *NBER Macroeconomics Annual*, ed. Stanley Fischer. Cambridge, MA: The MIT Press.
- Alesina, Alberto and Nouriel Roubini. 1992. "Political Cycles in OECD Economies," *Review of Economic Studies* 59 (4): 663-668.
- Alesina, Alberto, Nouriel Roubini, and Gerald D. Cohen. 1997. *Political Cycles and the Macroeconomy*. Cambridge, MA: The MIT Press.
- Basedau, Matthais and Alexander Stroh. 2008. "Measuring Party Institutionalization in Developing Countries: A New Research Instrument Applied to 28 African Political Parties." *GIGA Working Papers No. 69*.
- Bertocchi, Graziella and Michael Spagat. 2001. "The Politics of Co-optation." *Journal of Comparative Economics* 29:591-607.
- Blaydes, Lisa. 2006. "Electoral Budget Cycles under Authoritarianism: Economic Opportunism in Mubarak's Egypt." Prepared for the Annual Meeting of the Midwest Political Science Association. Chicago, IL: April 19-22.
- Blaydes, Lisa. 2008. "Authoritarian Elections and Elite Management: Theory and Evidence from Egypt." Prepared for the Princeton University Conference on Dictatorships. Princeton, NJ: April 2008.
- Block, Steven A. 2002. "Political Business Cycles, Democratization, and Economic Reform: The Case of Africa." *Journal of Development Economics* 67:205-228.
- Block, Steven A., Karee E. Feree, and Smita Singh. 2003. "Multiparty Competition, Founding Elections and Political Business Cycles in Africa." *Journal of African Economies* 12 (3): 444-468.
- Brusco, Valeria, Marcelo Nazareno, and Susan C. Stokes. 2004. "Vote Buying in Argentina." *Latin American Research Review* 39 (2): 66-88.
- Central Intelligence Agency. 2002. "Vietnam" in *CIA World Factbook*.
- Cheibub, José Antonio and Jennifer Gandhi. 2004. "Classifying Political Regimes: A Six-fold Measure of Democracies and Dictatorships." Presented at the American Political Science Association Annual Meeting. Chicago, IL: September 2-5.
- Choudhri, Eshan U. and Mohsin S. Khan. 2005. "Real Exchange Rates in Developing Countries: Are Balassa-Samuelson Effects Present?" *IMF Staff Papers* 52 (3): 387-409.
- Cingranelli, David L. and David L. Richards. 2008. *The Cingranelli-Richards Human Rights Dataset Version 2008.03.12*.  
<<<http://www.humanrightsdata.org>>>.
- Clark, William Roberts. 2003. *Capitalism, Not Globalism*. Ann Arbor: University of Michigan Press.
- Diaz-Cayeros, Alberto, Federico Estevez, and Beatriz Magaloni. Forthcoming. *Vote-Buying, Poverty, and Democracy: The Politics of Social Programs in Mexico, 1989-2006*.
- Drazen, Allan. 2000. "The Political Business Cycle after 25 Years." *NBER*

- Macroeconomics Annual* 15 (1): 75-117.
- Drukker, David M. 2003. "Testing for Serial Correlation in Linear Panel-Data Models." *Stata Journal* 3:168-177.
- Fair, Ray. 1978. "The Effect of Economic Events on Votes for President." *Review of Economics and Statistics* 60:159-172.
- Fair, Ray. 1982. "The Effect of Economic Events on Votes for President: 1980 Results." *Review of Economics and Statistics* 64:322-325.
- Fair, Ray. 1988. "The Effect of Economic Events on Votes for President: 1984 Update." *Political Behavior* 10:168-179.
- Faust, Jon and John Irons. 1999. "Money, Politics, and the Post-War Business Cycle." *Journal of Monetary Economics* 43:61-89.
- Fell, Dafydd. 2005. "Political and Media Liberalization and Political Corruption in Taiwan." *The China Quarterly* 184:875-893.
- Franseze, Robert. 2002. *Macroeconomic Policies of Developed Countries*. Cambridge: Cambridge University Press.
- Gandhi, Jennifer. Nd. Unpublished dataset.
- Gandhi, Jennifer and Adam Przeworski. 2006. "Cooperation, Cooptation, and Rebellion under Dictatorship." *Economics and Politics* 18 (1): 1-26.
- Golden, David and James Poterba. 1980. "The Price of Popularity: The Political Business Cycle Reexamined." *American Journal of Political Science* 24:696-714.
- Gonzalez, Maria de los Angeles. 2002. "Do Changes in Democracy Affect the Political Budget Cycle? Evidence from Mexico." *Review of Development Economics* 6 (2): 204-224.
- Grier, Robin M. and Kevin B. Grier. 2000. "Political Cycles in Nontraditional Settings: Theory and Evidence from the Case of Mexico." *Journal of Law and Economics* 43:239-263.
- Hallerberg, Mark. 2002. "Veto Players and Monetary Commitment Technologies." *International Organization* 56 (4): 775-802.
- Hibbs, Douglas A. 1977. "Political Parties and Macroeconomic Policy." *American Political Science Review* 71:1467-87.
- Hiskey, Jonathon. 1999. "Does Democracy Matter? Electoral Competition and Local Development in Mexico." PhD Dissertation, University of Pittsburgh.
- Kitschelt, Herbert and Steven I. Wilkinson. 2007. "Citizen-Politician Linkages: An Introduction." In *Patrons, Clients, and Policies: Patterns of Democratic Accountability and Political Competition*, eds. Herbert Kitschelt and Stephen I. Wilkinson. New York: Cambridge University Press.
- Kramer, Gerald. 1971. "Short-Term Fluctuations in U.S. Voting Behavior, 1896-1964." *American Political Science Review* 65:131-143
- Krueger, Anne and Ilter Turan. 1993. "The Politics and Economics of Turkish Policy Reform in the 1980's," in *Political and Economic Interactions in Economic Policy Reform: Evidence from Eight Countries*, eds. Robert Bates and Anne Krueger. Oxford: Basil Blackwell.
- Lewis-Beck, Michael. 1988. *Economics and Elections*. Ann Arbor: University of Michigan Press.
- Li, Xiangming. 2004. "Trade Liberalization and Real Exchange Rate Movement."

- IMF Staff Papers* 51 (3): 553-584.
- Madsen, Henrik J. 1980. "Electoral Outcomes and Macroeconomic Policies: The Scandinavian Cases." In *Models of Political Economy*, ed. Paul Whitely. London: Sage.
- Magaloni, Beatriz. 2006. *Voting for Autocracy*. New York: Cambridge University Press.
- Magloire, Fouda Seraphin. 1997. "Political Monetary Cycles and Independence of the Central Bank in a Monetary Union: An Empirical Test for a BEAC Franc Zone Member." *Journal of African Economies* 6 (1): 112-131.
- McCallum, Bennett. 1978. "The Political Business Cycle: An Empirical Test." *Southern Economic Journal* 44:504-515.
- Mink, Mark and Jakob de Haan. 2006. "Are There Political Budget Cycles in the Euro Area?" *European Union Politics* 7 (2): 191-211.
- Molinar Horcasitas, Juan and Jeffrey Weldon. 1994. "Electoral Determinants and Consequences of National Solidarity." In *Transforming State-Society Relations in Mexico: The National Solidarity Strategy*, eds. Wayne Cornelius, Ann Craig, and Jonathon Fox. La Jolla, CA: Center for US-Mexican Studies, UCSD.
- Nichter, Simeon. 2008. "Vote Buying or Turnout Buying? Machine Politics and the Secret Ballot." *American Political Science Review* 102 (1):19-32.
- Nohlen, Dieter, ed. 1999. *Elections in Africa: A Data Handbook*. Oxford: Oxford University Press.
- Nohlen, Dieter, ed. 2001. *Elections in Asia and the Pacific: A Data Handbook*. Oxford: Oxford University Press.
- Nohlen, Dieter, ed. 2005. *Elections in the Americas: A Data Handbook*. Oxford: Oxford University Press.
- Nordhaus, William. 1975. "The Political Business Cycle." *Review of Economic Studies* 42:169-90.
- Przeworski, Adam, Michael E. Jose Antonio Cheibub, and Fernando Limongi. 2000. *Democracy and Development*. New York: Cambridge University Press.
- Remmer, Karen L. 1993. "The Political Economy of Elections in Latin America, 1980-1991." *The American Political Science Review* 87 (2): 393-407.
- Reuter, Ora John. 2009. "The Origins of Dominant Parties." PhD Dissertation, Emory University.
- Rogoff, Kenneth. 1990. "Equilibrium Political Budget Cycles." *American Economic Review* 80:21-36.
- Sartori, Giovanni. 1976. *Parties and Party Systems: A Framework for Analysis*. Cambridge: Cambridge University Press.
- Schaffer, Frederic Charles. 2007. *Elections for Sale: The Causes and Consequences of Vote Buying*. Boulder: Lynne Rienner Publishers.
- Schaffer, Frederic Charles & Andreas Schedler. 2007. "What is Vote Buying?" In *Elections for Sale: The Causes and Consequences of Vote Buying*, ed. Frederic Charles Schaffer. Boulder: Lynne Rienner Publishers.
- Schedler, Andreas. 2002. "The Menu of Manipulation." *Journal of Democracy* 13 (2): 36-50.
- Sheffrin, Steven M. 1989. "Evaluating Rational Partisan Business Cycle Theory." *Economics and Politics* 1:239-259.

- Schuknecht, Ludger. 1996. "Political Business Cycles in Developing Countries." *Kyklos* 49 (2): 155-70.
- Simpser, Alberto. 2006. "Electoral Manipulation and Turnout in Mexico under the PRI." << <http://www.drclas.harvard.edu/uploads/images/490/Simpser-Mexico-03.06.pdf>>>.
- Sisson, Charles A. 1986. "Fund-Supported Programs and Income Distribution in LDCs." *Finance and Development* 33-36.
- Stein, Ernesto & Jose Streb. 2004. "Elections and the Timing of Devaluations." *Journal of International Economics* 63 (1): 199-145.
- Stokes, Susan C. 2005. "Perverse Accountability: A Formal Model of Machine Politics with Evidence from Argentina." *American Political Science Review* 99 (3): 315-25.
- Tufte, Edward. 1975. "Determinants of the Outcomes of Midterm Congressional Elections." *American Political Science Review* 69:812-826.
- United Nations' FAOSTAT. 2009.  
<<http://faostat.fao.org/site/609/DesktopDefault.aspx?PageID=609#ancor>>.
- Vreeland, James. 2007. *The International Monetary Fund: Politics of Conditional Lending*. New York: Routledge.
- Wang, Chin-Shou and Charles Kurzman. 2007. "The Logistics: How to Buy Votes" in *Elections for Sale: The Causes and Consequences of Vote Buying*, ed. Fredric Charles Schaffer. Boulder: Lynne Rienner Publishers.
- World Bank. 2004. *World Development Indicators*.  
<<http://go.worldbank.org/3SGLDH5V10>>.