Just in Time: Political Policy Cycles of Land Reform[*]

Andrew Q. Philips[†]

July 3, 2019

Abstract

While the political budget cycle literature focuses on the manipulation of existing policies, an analysis of the impact of the passage of redistributive policies themselves remains absent. I contend that policy passage is a strategically timed signal to voters used before elections to benefit the incumbent. Using aggregate data on land reforms in India from 1957 to 1992, I find that reforms are indeed timed before elections. Second, using historical survey data, I show that land issues remain a strong signal to Indian voters over time, even in states that have already enacted reforms. These findings provide evidence for political policy cycles.

Keywords: political cycles; land reform; India

Word Count: (abstract) 102; (manuscript) about 7,940

Author biography: Andrew Q. Philips is an Assistant Professor in the Department of Political Science at the University of Colorado Boulder. His work primarily focuses on political economy and quantitative methodology. His recent work has appeared in *American Journal of Political Science, Political Research Quarterly*, *Public Choice*, and *Political Science Research and Methods*, among others.

For parties in government, elections represent a period of uncertainty. To reduce this uncertainty, incumbents may create a variety of economic and distributional distortions around elections in order to remain in office, such as increasing total spending, running budget deficits, or using targeted forms of distribution to specific voter groups. These are known broadly as political cycles. With few exceptions, the extant literature has focused only on the manipulation of existing policies. While fluctuations in expenditures and revenues around elections are important, analyses of the strategic passage of new policies remain understudied in the literature on political cycles.

I argue that political parties, conscious of the need to win support among large segments of the population, will time the passage of redistributive policies in order to maximize their support. While they do not consist of incremental changes like budgets, I find consistent evidence that certain policies are passed just before elections. Moreover, this process repeats itself over time, suggesting that these policies are an important tool used to win over voters. By focusing on the timed policy passage of redistributive policies, I contribute to the growing literature on electoral cycles in non-budgetary areas (DeRouen and Heo 2000; Ahlquist 2010; Mechtel and Potrafke 2013; Tepe and Vanhuysse 2014).

This article addresses two related lines of literature: distributive politics and political cycles. Distributive politics primarily focuses on the distributive consequences of elections. In contrast, political cycles tend to focus on macro-level manipulation of existing fiscal policies. Drawing off work emphasizing how governments gain electoral support through increasing spending to "visible" budgetary categories, I argue it is not necessarily the actual rewards—but the promise of future rewards—that has been overlooked in the literature. Policy passage is an ideal form of manipulation since it provides a clear signal to voters of promised future benefits, while remaining less costly to governments than a strategy of altering existing policies, particularly so if governments are fiscally constrained (Nooruddin and Chhibber 2008).

To test for political policy cycles, I examine the passage of state-level land reform

legislation in India. Certain groups, primarily the large number of landless and poor working farmers—a valuable voting bloc in India (Bandyopadhyay 1986; Banerjee, Gertler and Ghatak 2002; Bardhan and Mookherjee 2010)—clearly benefit more than others. Thus, promises of expropriation are a signal meant to attract a substantial number of votes from the middle and lower classes (Banerjee and Iyer 2005). To support this claim, I use historical survey data from the Indian National Election Study to examine whether repeated passage of land reforms still remains salient to voters.

Results suggest that policies such as land reform are passed the year before an election. This result remains robust to a variety of econometric specifications as well as the inclusion of additional control variables, providing support for the theory that policies are passed strategically in order to win votes. Moreover, the survey results show that voters view land reform as a salient issue, regardless of previous policy enactments. Taken together, these results indicate that land reform policy is a signal to voters that politicians use to their advantage.

The determinants of political budget cycles

As elections near, governments are likely to create budget cycles in order to sway voters by bending the cyclical line in their favor through fiscal or monetary manipulation (Philips 2016). A large body of literature focuses on the factors that affect political budget cycles, such as the flexibility of election timing (Kayser 2005), or democratic consolidation (Barberia and Avelino 2011). Equally important is timing; policies must be implemented at a time in which the party in government can take credit for it. In order for such implementation to be effective, policies must be passed close enough to an election that they are still fresh in the minds of voters. Although the focus of many of these theories has been on timing, the beneficiaries of particular strategies has been underemphasized in the literature.

While scholars of political cycles have written extensively about the causes of fiscal

changes around elections, scholars of distributive politics have focused on targeted spending designed to win the support of particular groups. Dixit and Londregan (1996) propose that instead of providing benefits to core supporters, parties in a two-party system will compete for swing voters by allocating redistributive policies towards them (c.f., Kwon, 2005). This model contrasts with the core-voter theory (Cox and McCubbins 1986). In a compromise between these competing theoretical expectations, Albertus (2012) finds that governments employ a mix of short-term rewards for their core voters while giving more permanent funds to swing supporters in order to build clientelistic relationships.

Targeted distribution may also be strategically timed to coincide with elections. For instance, Cole (2009) finds that agricultural lending to Indian farmers increases between 5 and 10 percent during an election year. In Columbia, targeted expenditure areas such as roads and infrastructure significantly increase during election years in order to gain voter support (Drazen and Eslava 2006). In other instances, programmatic policies may be enacted to benefit entire constituency types. For example, Sáez and Sinha (2010) find that Indian states increase spending on public goods such as education and health prior to an election. Overall, in a meta-analysis, Philips (2016) finds limited evidence that any particular category of expenditures is routinely increased before elections.

Party ideology is also an important component of distributive policies, although the extent to which ideology applies to distributive spending appears to be conditional on whether parties spend opportunistically or based on partisan considerations. On the one hand, Sáez and Sinha (2010) hypothesize that supporter composition influences the ideological spending preferences of Indian political parties. Yet they find almost no significant ideological effect across parties, evidence that they are opportunistic; parties spend in any budget category necessary to ensure re-election. In contrast, the investigation of pre-election spending in Portuguese municipalities by Veiga and Veiga (2007) suggests that parties of the left tend to spend more than right-wing parties around elections. Therefore, ideology may affect not only the type, but also the magnitude of

opportunistic spending.

Finally, the intensity of competition between political parties may determine whether distributive benefits are directed towards core supporters or the population more broadly (Chhibber and Nooruddin 2004; Cole 2009; Aidt, Veiga and Veiga 2011). Parties will reward core supporters in less competitive regions, yet reward swing voters as competition increases, as long as core supporters remain loyal even without an increase in benefits.

Political "policy" cycles

Despite the substantial literature on both distributive policies and political budget cycles, there is relatively little research linking the two together. Although existing policies may change during elections, does the passage of distributive policies become more likely as well? In other words, is it possible for the government to gain the support of voters through mechanisms other than fiscal spending before an election? Some scholars have found that non-budgetary policies can be used as signals to voters. For example, Tepe and Vanhuysse (2014) find that more artists are hired for public theaters and orchestras in Germany around elections. DeRouen and Heo (2000) conclude that US defense contracts are more numerous before elections. Mechtel and Potrafke (2013) find that job-creation schemes are passed before elections in Germany, while Ahlquist (2010) finds that social pacts in developed economies are more likely to occur.

Like these scholars, I contend that the *passage* of certain policies—not just changes in spending—constitutes a signal to voters of promised returns in the future, should they re-elect the incumbent. In effect, a contract between promising to deliver the policy and the assurance of a vote is struck. Just as with an increase in spending, policy passage changes a voter's evaluation of the incumbent. Policy passage contains both retrospective and prospective components. Policies passed before an election stay fresh in the minds of voters, increasing their likelihood of a positive retrospective evaluation.

For these voters, it is the visibility component that matters most (Veiga and Veiga 2007). Yet unless the policy is implemented quickly, there is also a prospective component; a need to re-elect the incumbent so that the policy may be fully implemented.

In addition to visibility, the policy must be easily attributed to the current government. It needs to be cost-effective and also a salient issue for large segments of the population. While existing research has emphasized visibility mechanisms, it has not extended to the context of the passage of policies aimed at maximizing electoral support. Although policy passage may not be the only timed opportunistic tools governments use, it may serve as a substitute for manipulating the budget due to policy salience. Below I show how land reform is one example of an ideal policy instrument.

Land reform in India: A signal to voters?

To test for political policy cycles, I examine the passage of Indian land reform from 1957 to 1992 in 15 major Indian states. There are several reasons why a single-country analysis is an ideal research design. Land reform is a polarizing issue in many countries, especially India. In principle, they were designed with three goals in mind. First, to rectify historical disparities between groups. Second, to alleviate poverty, since India is home to a full third of the world's poor. Third, to reallocate land in order to use it more productively, and in turn boost growth. Advocates argue that reform leads to increased land security, property values, land rights, and even social capital (Banerjee, Gertler and Ghatak 2002; Deininger et al. 2003; Teofilo and Garcia 2003). After India gained independence in 1947, each state has been tasked with land reform policy and implementation; any pressure from the central government for land reforms is largely an advisory role.

The land system in India in the 20th century can trace its origins to colonial British rule, although a landlord-tenant system was probably in place even before the British. Largely relying on property levies for revenue, the colonial government devised a land system comprised of three primary categories (Banerjee and Iyer 2005). Existing pri-

marily in the north and east, zamindari systems were traditional landlord-tenant based structures in which the landholder was the intermediary between tenants and the British. Zamindaris were typically more extractive than other systems, since landlords were able to keep any windfall revenues after paying a fixed amount to the colonial government. The second category were village-centered mahalwari systems, in which the entire village collectively paid a tax. These were established in what is now Punjab and Uttar Pradesh. The third category was comprised of individual farmer systems, or raiyatwari. These were established along the eastern and western coasts, and in parts of Assam. Zamindari and raiyatwari systems were the most common land structure in India, comprising some 95 percent of the total (Hanstad et al. 2009).

Land reforms are best classified into four types. Tenancy reforms were enacted, "to regulate tenancy contracts both via registration and stipulation of contractual terms...as well as attempts to abolish tenancy and transfer ownership to tenants" (Besley and Burgess 2000, p. 392). Second, certain land reforms dissolved the intermediary land-holders that had been crucial to the agricultural system in British India. Much of these estate-type systems were prevalent in the east, in what later became Bengal-state. Third, ceilings on landholdings were enacted to limit the amount of land a person or family could own. Fourth, some landholdings were allowed to be consolidated, in a move to allow greater agricultural efficiency. As shown in Figure 1b, although tenancy reforms were the most popular type throughout much of the 20th century, there is substantial variation over time in all four categories.

Saliency of land reform, and political pressure to implement reforms, has existed even before Indian independence. Since landholders often had tightly aligned interests with the colonial government, by independence they had become deeply unpopular (Hanstad et al. 2009). Taking advantage of this growing sentiment, the Communist Party of India incorporated a motto of "land to the tiller" into its party platform in 1948. This was followed by the Congress Party creating an Agrarian Reforms Committee a year later (Joshi 1975, p. 38). Even into the 1970s, mass campaigns for agrarian reform took place such as Operation Barga in West Bengal in 1978, which tried to create a

stronger legal basis for tenants through an on-the-ground implementation program (Bandyopadhyay 1986; Banerjee, Gertler and Ghatak 2002). However, as shown in Figure 1a, which depicts the number of land reforms enacted in the 15 major states in India from 1957 to 1992, the fact that almost every state enacted at least some type of reform suggests that land reform is not simply an ideological policy implemented by the left, but rather an opportunistic policy due to its sheer popularity. As an Assamese legislator pointed out, "we are to look to the interests of 96% of the cultivators of land and not to the 4% of the landlords or capitalists or big people who are holding lands for generations depriving these cultivators for generations of their dues." (Borgohain 1992, p. 49).

In addition to the continued saliency described above, many reforms differed in what they hoped to accomplish. In some states, tenancy reforms enabled land to be passed down by families, while in others legal and administrative hurdles limited the effectiveness of land reform (Bardhan and Mookherjee 2010). Policies such as ceilings on landholdings varied between states as well; in the 1960s Assam had a ceiling of 20 hectares that any single landowner could own, while in Rajasthan this was 136 hectares (Das 1995). Some reforms permitted families to have twice the ceiling on landholdings if they had five or more members in their family. Others offered an exemption, "of tea, coffee, rubber, cardamom and cocoa plantation[s] and of lands held by religious and charitable institutions beyond normal ceiling limits" (Bandyopadhyay 1986, p. A-51). Although reforms differed in substance, they all tried to implement at least some form of redistribution in the interests of the poor (Das 1995).

Despite the mixed literature on the economic consequences (Deininger et al. 2003), large numbers of land-poor tenants and farmers—as well as discriminated castes— directly benefitted from the passage of redistributive policies (Bandyopadhyay 1986; Bardhan and Mookherjee 2010). For instance, as a result of Operation Barga in West Bengal, an estimated 65 percent of tenants had registered with the state government by 1993, providing legal protection against landholders (Banerjee, Gertler and Ghatak 2002, p. 242). Issues of land were also important to a large number of poor voters. As
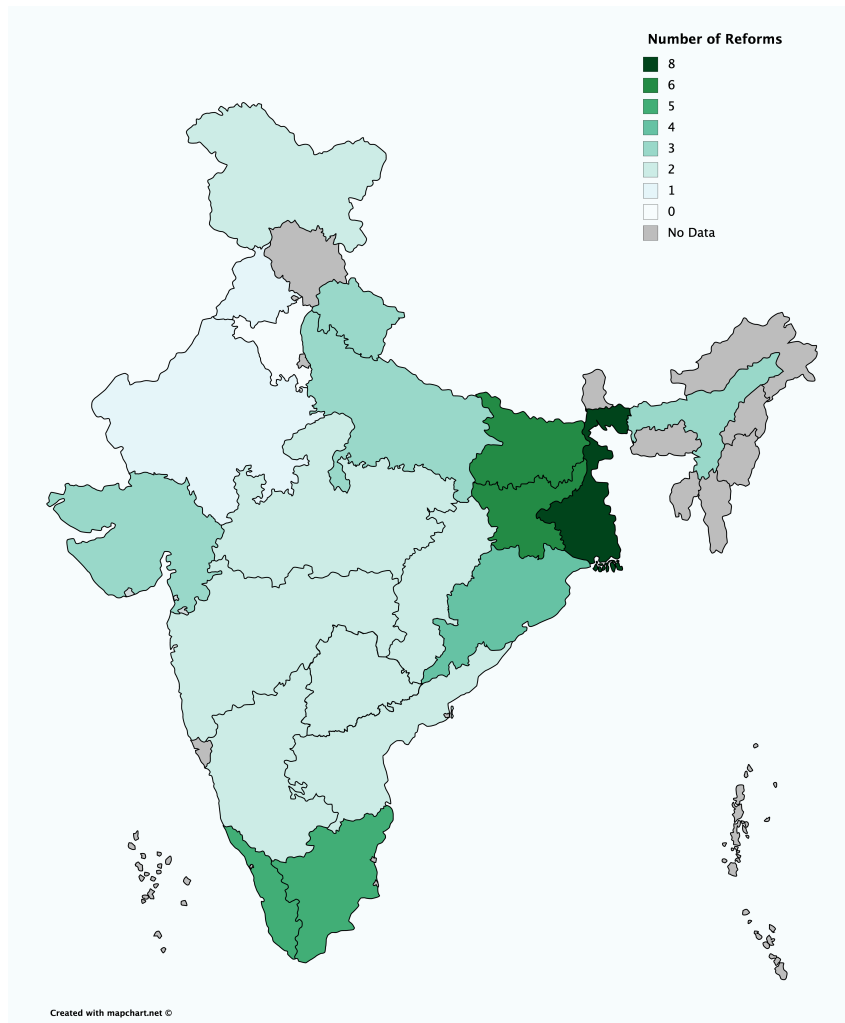
(a) Spatial distribution of reforms
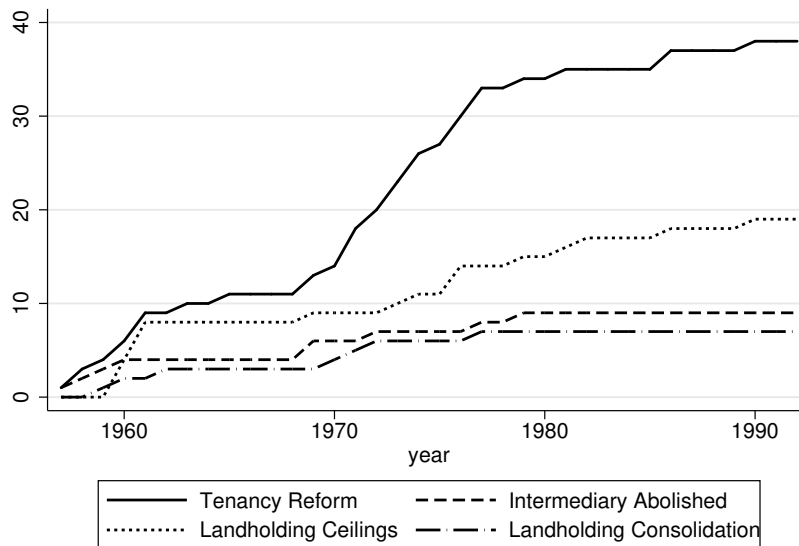
(b) Type of reform over time

Figure 1: Land reform is dispersed over time and space

Note: In Figure 1a, Uttarakhand, Chhattisgarh and Jharkhand were part of Uttar Pradesh, Madhya Pradesh and Bihar, respectively, and were split in 2000. Telengana was part of Andhra Pradesh until 2014.

evidence of this, Figures 2a and 2b show the results of two questions from the 1971 Indian National Election Survey (Eldersveld, Ahmed and Marvick 2011). The first asks if there should be a ceiling on property ownership. Nearly 70 percent of respondents thought that there should be some limit on the amount of land an individual can own. The second question asks if the respondent approves of land grabs (the taking of property by those who have little to no land themselves). This answer is more split but still highly polarizing, with about 44 percent approving of land grabs compared with around 45 percent disapproving.

(a) "Should there be a ceiling on property?"   (b) "Do you approve of land grabs?"
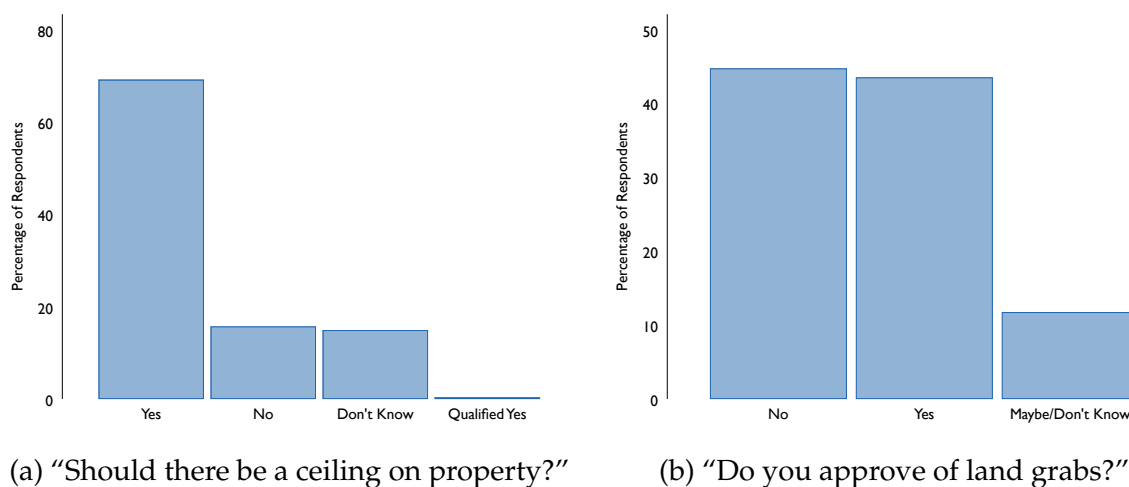
Figure 2: Land reform is a salient policy for voters

Note: Figure 2a: "Some people say that the government should pass legislation so that people are not allowed to own and possess large amounts of land and property. Others say that people should be allowed to own as much land and property as they can acquire—what would you say?" Figure 2b: "Some political leaders and parties have been advocating that poor people with not land and property should occupy a part of land and property of those who have a large amount of land and property. Do you approve of this or do you disapprove?"

In addition to voter demand, land reforms are ideal policy cycle instruments for governments due to their cost-effectiveness. Reforms are in-kind rather than cash. They impose little cost on the government since revenues to pay for reforms do not have to be generated through taxes or borrowing. Instead, the burden falls mostly on landholding elites. This policy is ideal since it benefits supporters and circumvents budget constraints. Freed of these constraints, governments are likely to implement land reforms in areas with large amounts of poor voters who own little land, and are thus most susceptible to these promises. Moreover, this may be far more efficient than

the cost of large redistributive handouts to win voters. Following an analysis with aggregate data, I test the theoretical claim of whether reforms are salient to voters using survey-level data below.

In India, mandated elections for the state assembly occur every five years.[1] Therefore, policy passage should consistently occur just before an election, and reform should be less likely after an election since the need to win over voters is small. This leads to the following hypothesis:

H$_1$: Reforms are most likely to occur the year before an election

Since state elections are typically held early in the year, I expect governments to pass the policy the year before an election.

As Chhibber and Nooruddin (2004) emphasize in the Indian context, based on the level of competition, parties in Vidhan Sabha elections face different incentives in their decision to provide public goods. In multiparty systems there may be less total voters to buy off, but the margin of victory is much smaller. This makes reform more important in order to win votes. In systems with two or more competitive parties, governments have an incentive to enact land reform in order to beat their opponent in elections. By contrast, in states where a single party is consistently in government, there tends to be less competition in elections, and parties should be less likely to push for reforms, regardless of ideology (Bardhan and Mookherjee 2010). Therefore, I hypothesize that land reforms will be more likely during elections where two or more parties are engaging in electoral competition.

H$_2$: Multi-party competition makes land reform more likely, relative to single-party competition

Ideology is another factor that may determine whether parties implement policy opportunistically or for partisan reasons. Although party ideology could affect the

---

[1]Earlier elections are possible if a coalition collapses or if "President's Rule" is imposed. I account for this in the robustness section. Jammu and Kashmir has elections every six years according to its constitution.

desired extent of land reform, with few exceptions, parties on either side of the ideological spectrum have advocated for reform. For instance, the centrist, "[Indian National] Congress Party advocated the abolition of intermediaries while the growing left and radical movement emphasized the rights of the subtenants and the actual tillers." (Eashvaraiah 1993, p. 159). While post-election implementation effectiveness of policies may be conditional on ideology, the literature suggests that the passage of reforms is not. Therefore, rather than policies that are implemented based on ideology, I expect that opportunistic parties of all ideologies will take advantage of increased voter support through the passage of reforms. I generate the following hypotheses regarding specific ideologies in India: state governments controlled by leftist parties, such as the Communist Party of India and the Communist Party of India-Marxist, will be most likely to implement land reform. Centrist parties such as the Indian National Congress (INC) have, "traditionally represented the interests of big landowners in rural areas," and thus should be less likely to implement reform (Bardhan and Mookherjee 2010, p. 1573). Although the INC gave strong support for land reform around independence, over time they slowly backed away from strong redistributive preferences as they began to rely on the support of constituencies other than the poor (Zaidi 1985). This places the INC somewhere between the left and the right. Right-wing parties are expected to implement even less than the INC.

H_3: Left-leaning governments make land reform more likely relative to centrist governments

H_4: Right-leaning governments make land reform less likely relative to centrist governments

Data and methods

To test the hypotheses above I use the dichotomous dependent variable, land reform, from Besley and Burgess (2000, 2002, 2004), from 1957 to 1992. It is coded 1 if a land

reform occurred in state i in year t.[2] The dependent variable encompasses the following four categories: tenancy reform, dissolving intermediaries, consolidating landholdings, or imposing a landholding ceiling on property owners. In the Supplemental Materials (SM), I test the robustness of the findings to disaggregating these categories.

Although the coding of the dependent variable does not take into account the intensity of land reform, there are a number of reasons why this indicator might still be ideal. First, land reform was highly context-specific, which makes coding difficult. Second, a dichotomous indicator still captures the underlying casual mechanism. Passing land reforms sends a signal to voters that benefits (through redistribution from the reform) are likely to occur in the future. I parse out this out more in the individual-level analysis below. Third, no good measures exist that proxy for intensity of reform.

For party competition and ideology I draw from Chhibber and Nooruddin's (2004) coding of the Indian states. They create a number of dummy variables to account for low-competition states and multi-party contested state assembly elections. Arguably, in a state dominated by a single party, ideology matters less to voters than in multiparty states where ideology could come into play in determining land reform policies. I extended their four indicators back ten years, lengthening the range of ideological competition from 1957 to 1992, and expanding the analysis for a total of 15 Indian states over the period. States that have a leftist party (e.g., any of the communist or socialist parties) that held over 20 percent of state assembly seats in a given year—as well as a centrist party (such as the INC or most regional parties) that clears the 20 percent threshold—are coded as *Two-Party: Left-Center*. I code a state-year as *Two-Party: Center-Right* if in addition to a competitive centrist party, a rightist party (e.g., the Bharitiya Janata Party or Shiv Sena) also held over 20 percent of seats. States are coded as *Multiparty: Left-Center-Right* if leftist, centrist, and rightist parties each clear the 20 percent threshold. Last, states are *Single-Party Dominant* if a second party is unable to secure

---

[2]The analysis stops in 1992, since in 1993 a constitutional amendment was passed which created the Gram Panchayat system—village-level elected councils—from which much of the state's power was decentralized to (Besley et al. 2004).

more than 20 percent of seats.[3] Below I also employ alternative specifications of ideology and competition to test the robustness of my findings. The resulting model is the following:

$$\Pr(LandReform_{it}) = f(Elections_{i,t+s}, Ideology_{it}, Competition_{it}) \qquad (1)$$

where the probability of land reform in a given state-year is a function of $Elections_{i,t+s}$, which are a set of dummy variables equal to one if the state i is holding an election in year t—where $s \in -1, 0$—one year before or the year of an election, as well as the ideology and competition variables described above. To address those who may be targets of land reform by politicians, I also add the percent of those in a state owning no land.

Results

As a preliminary validity check, in Figure 3 I show the predicted probability from an OLS model with state and year fixed effects with clustered standard errors by state, in which the only regressors are dummy variables for the election year and each of the four years before the election; a similar approach is used by Khemani (2004). While full results are in the SM, Figure 3 indicates that the probability of land reform tends to increase before an election, culminating in a predicted probability of just over 15 percent in the year before an election.

Given the suggestive evidence in Figure 3, in Table 1 I present the results from logit models with state and year fixed effects, using the full model specification discussed in Equation 1. Results in the SM using random intercepts result in nearly identical results. As shown in Model 1 in Table 1, elections affect the propensity for reform. In the year before an election, the parameter estimate is statistically significant at the 10 percent level and is in the hypothesized positive direction. The election-year dummy is

---

[3]Thus, each of these dummy variables accounts for each position's effect on land reform relative to a two-party competitive Parliament with two centrist parties.
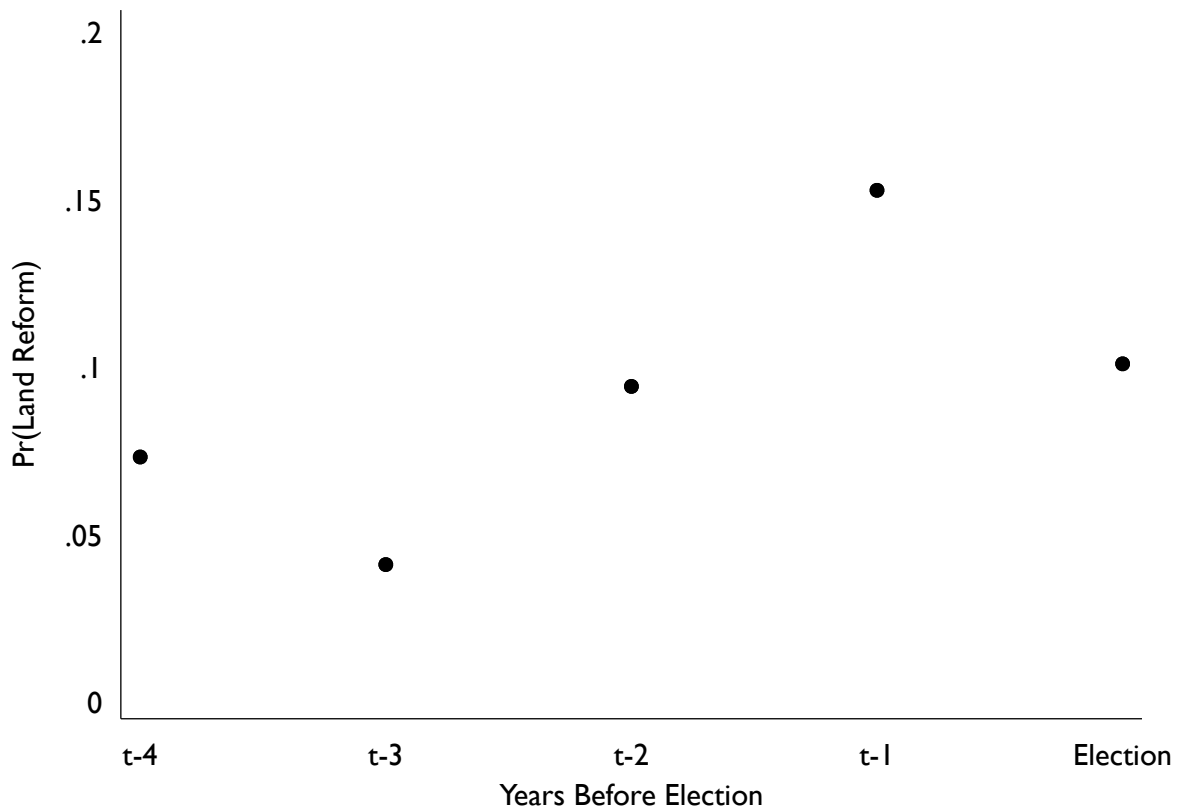
Figure 3: The probability of land reform is highest the year before an election

Note: Predicted probabilities from an OLS model with state and year fixed effects (held at means). Results available in SM.

positive, much smaller in magnitude, and is not statistically significantly different from zero. This lends support to the hypothesis that governments strategically time policies to occur before an election in order to win votes. Holding all other variables at their means and calculating the change in predicted probabilities, I find that land reform is about 4.4 percentage points more likely to occur in year before an election than in the years prior. Given that the predicted probability of land reform in these prior years is only around 2.7 percent (according to Model 1), this represents a substantial increase in the probability of reform passage.

In terms of ideology and competition in Model 1, none of the competition indicators appear to increase the likelihood of land reform passage, although keep in mind that these are looking at only within-state variation in ideology and competition. When a state becomes single-party dominant, there appears to be an increased probability of

Table 1: Evidence for political policy cycles

	(1)	(2)	(3)	(4)
Year Before Election	1.01*	0.95*	0.95*	1.06*
	(0.52)	(0.54)	(0.54)	(0.55)
Election Year	0.18	0.25	0.25	0.44
	(0.61)	(0.63)	(0.63)	(0.65)
Single-Party Dominant	0.77	0.53	0.52	0.64
	(0.64)	(0.54)	(0.55)	(0.59)
Multiparty: Left-Center-Right	-0.54			
	(1.20)			
Two-Party: Left-Center	0.58			
	(1.74)			
Two-Party: Center-Right	0.50			
	(1.19)			
% Owning No Land	0.12**	0.12**	0.12**	
	(0.05)	(0.05)	(0.05)	
Leftist		1.98**	2.00**	2.09**
		(0.92)	(0.95)	(0.96)
Congress		0.48	0.48	0.71
		(0.65)	(0.65)	(0.67)
Effective Number of Parties			-0.02	-0.13
			(0.21)	(0.21)
% Land Owned by Bottom 50%				-0.28
				(0.21)
% Land Owned by Top 10%				0.03
				(0.12)
N	515	515	515	515
States	15	15	15	15
State FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Log Lik.	-89.76	-87.59	-87.59	-88.28
χ^2	80.29	84.64	84.65	83.26

Note: Dependent variable is dichotomous and equal to 1 if land reform was passed in state i in year t. Logit with standard errors in parentheses. Two-tail tests. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

land reform passage, although this coefficient is not statistically significant across specifications. The percentage of the population owning no land is in the expected positive direction, and is statistically significant across all models. This provides evidence that poor, landless voters demand reform, and politicians try to win their support through implementing policy.

These results provide evidence that land reforms are passed in the year before an election. Why does passage occur in the year before an election and not in the election year? Most likely this is because state assembly elections are typically held early in the year (March is the median election month in the sample). In the SM, I investigate this further by using a weighted election variable that takes into account the election month. The results are consistent with those in Table 1.

In Model 2 I substitute the party competition and ideology dummy variables for Leftist and Congress dichotomous indicators. Leftist is coded one if a left-wing ideology party is in power in the state, and Congress is coded one if the Congress Party is in control. A leftist ideology exerts a strong, statistically significant positive effect on the likelihood of land reform passage. These results also suggest that leftist parties are more likely to pass land reform than the Congress Party, and that Congress is more likely than other parties to pass reform as well, all else equal (although this latter effect is not statistically significant. The probability of reform if a state becomes controlled by a leftist government increases by about 12.7 percentage points, compared to other ideologies. This is consistent with hypotheses H_3 and H_4. Moreover, it supports previous findings that find that ideology plays a role in redistribution (Chhibber and Nooruddin 2004). However, competition, as examined in Model 1, seems to matter less than ideology. This suggests that although parties in government may opportunistically time the passage of land reforms, they are more likely to do so along ideological lines.

Although the effect of a simple ideology measure was examined in Model 2, it did not account for competition. I add the Effective Number of Parties in Model 3. Even with its inclusion, the year before the election coefficient remains significant and in

the same direction as before. The same is true for the leftist coefficient, as well as the percentage of the population owning no land. However, the effective number of parties does not achieve statistical significance. This provides evidence that the competitive environment does not appear to affect the decision to enact land reform. To test the robustness of this finding, in the SM I dichotomize the effective number of parties along the lines of Chhibber and Nooruddin (2004). These results suggest that states where there are three or more effective parties have a higher propensity for land reform.

In Model 4, I investigate an alternative measure for land-poor voters who increase demand for land reform. Including the percentage of land owned by the bottom 50 percent of the income distribution as well as the percentage of land owned by the top 10 percent captures the inequality of land ownership within a state. Although these variables are in the expected direction—as the poor own more land the need for land reform decreases, as the rich own more land the need for land reform increases—they are not statistically significant at conventional levels. Moreover, including proxies for the inequality of land ownership does not change the earlier results in regards to timing and competition. Thus, while higher proportions of the population owning no land are associated with an increased likelihood of land reform (Models 1, 2, and 3), increased land concentration among either the poor or rich does not lead to more or less policy passage.

In the SM I perform a host of robustness checks. To alleviate concerns about modeling choice, I estimate a GLM model with a logistic link and random intercepts, as well as a linear probability model. The results using these specifications are the same, if stronger, as the ones shown above. I also find that the results are robust to operationalizing the election indicator using a monthly weighting scheme, as well as accounting for the year after an election. To test whether the credibility of reforms may have decreased over time, I split the sample into the first decade of data, as well as before and after the 1975-1977 Emergency (during which civil liberties were suspended and political and social shifts occurred); the results remain robust to splitting the sample. It is also possible that the type of land reform might affect policy timing; I find that

all types of reform tend to be passed in the year before a state election. There is also the issue of endogeneity in state elections (Khemani 2004), since incumbents might instead call early elections to coincide with policy passage. The findings remain robust to accounting for these elections. Last, I dichotomize party competition, change the methodological specification, account for President's Rule (the suspension and calling of new elections by the Indian President), as well as account for partisan linkages between the state and national governments. The main findings remain robust to these alternative specifications.

Individual-level evidence for the use of policy as a strategic tool

The macro-level evidence presented above suggests that land reform is a strategic tool passed before an election in order to gain the support of voters. This compliments studies in other countries that show that land reform policies may increase political support (Albertus 2012; Boone 2012). However, this theory raises two concerns at the individual level about the use of policy passage as a strategic tool to win votes. First, does the repeated use of land reforms weaken its credibility? In other words, if land reforms are passed but not fully implemented, are voters aware of this? If so, then continuous policy passage may water down the effectiveness it has as a signal to voters. Second, if reforms are truly effective, a smaller number of voters may be won over by the promise of further reforms. Does the effectiveness of land reform make it less likely to be passed in the future?

To examine these potential concerns, I turn to individual-level survey data from the nationally representative Indian National Election Study (Eldersveld, Ahmed and Marvick 2011). Two important questions were included over time in these non-longitudinal studies. First, both the 1967 and 1971 election studies asked respondents an open-ended question about the 'most-important' problem (MIP) facing their village or town. I coded respondents as having Land/Inequality is the MIP if they voiced concerns over issues of land or issues of inequality. This variable is a dichotomous indicator where 1

indicates the respondent was concerned with land reform or issues of inequality, and 0 indicates the respondent was concerned with some other issue.

Second, both the 1971 and 1985 surveys ask whether or not the respondent thinks people with no land or property should occupy the land of those who have a large amount of property. I coded Approve of Land Grabs as a dichotomous variable with one meaning "approve of land grabs" (zero meaning "disapprove"/"uncertain"). Though imperfect, these measures serve as proxies for the importance of land reform in the minds of voters.

The question core to this theory is whether the passage of land reform results in a decrease in the proportion of respondents that approve of land grabs or think land issues are the most important problem. If land reform is a strategically-timed policy, voters should continue to show a concern for land grabs and land reform even in states where land reform has already occurred. To test whether land reform issues remain salient to voters, even after reforms have been passed, I consider a difference-in-differences (DiD) design. This design is appealing since there are only two surveys available (1967 and 1971 for the most important problem question and 1971 and 1985 for the land grab question), a substantial number of respondents are sampled within each state, and some, though not all states, enacted reform between the "pre-" and "post-" surveys in the dataset.

For the "Most Important Problem" question, I estimated the following model:

$$Pr(\text{Land Reform is MIP}_{ist}) = v_t + \alpha_s + \beta R_{st} + \epsilon_{ist} \tag{2}$$

where the probability of respondent i living in state s in survey year t responding that land or inequality issues are the most important problem facing the nation is a function of a dichotomous variable equal to one if the respondent is in the latter, 1971 survey, state fixed effects, α_s, and a treatment variable, R_{st}, equal to one in 1971 if the state enacted *any* land reform between 1967 and 1971, and zero otherwise.

One key assumption that must be met in DiD designs is that of parallel trends; that the average change in the control group (respondents living in states that did not enact land reform) is the counterfactual of the treatment group (those who did). One way this could be violated would be if individuals moved between states that received land reform and those that did not. Overall, this seems unlikely, given that interstate migration rates in India are low, especially during this period (Rosenzweig and Stark 1989; Munshi and Rosenzweig 2006).

The results are shown in Table 2, Model 5. As indicated by the results, the difference-in-differences approach indicates that absent any reform passage, an individual living in a state in 1971 is almost three percentage points more likely as a respondent in 1967 to believe that issues of land or inequality are the most important problem facing India.[4] For a respondent in states that passed reform, they are about 2.5 percentage points less likely to feel that land issues are the most important problem than a respondent in a state that has not in 1971.[5]

In Model 6, I substitute the *Any Reforms* dichotomous variable for a continuous one that measures the *Number of Reforms* passed between 1967 and 1971. Once again, a respondent in 1971 is about 2.8 percentage points more likely to feel that land issues are the MIP than one in 1967 in states that did not enact any reforms. The marginal effect of enacting a reform is about -2.3 percentage points, again suggesting that enacting land reforms leads to slightly lower feelings that land inequality is the MIP. Overall, after controlling for unobservable state-specific factors, respondents tend to be influenced by land reforms, but not drastically. For those states that have not enacted land reforms, respondents seem to become more concerned with land issues over time.

In Models 7 and 8 in Table 2, I add in control variables to account for individual-level characteristics. These include dummy variables for social groups at each end of the social hierarchy, gender, religion, occupation, a 5-category education indicator,

---

[4]This is the discrete change in probability between 1967 and 1971, given no reforms, holding all fixed effects at their means.

[5]This is the marginal effect of moving from no reform to any reforms in 1971, holding other variables at their means.

Table 2: Individual-level support for land reform

	(5) Land/Inequality MIP, 1967 & 1971 Surveys	(6) Land/Inequality MIP, 1967 & 1971 Surveys	(7) Land/Inequality MIP, 1967 & 1971 Surveys	(8) Land/Inequality MIP, 1967 & 1971 Surveys	(9) Approve Land Grabs, 1971 & 1985 Surveys	(10) Approve Land Grabs, 1971 & 1985 Surveys	(11) Approve Land Grabs, 1971 & 1985 Surveys	(12) Approve Land Grabs, 1971 & 1985 Surveys
2nd Survey	0.71***	0.74***	0.67***	0.69***	-2.96***	-4.05***	-2.80***	-3.92***
	(0.19)	(0.19)	(0.21)	(0.21)	(0.32)	(0.32)	(0.33)	(0.33)
Any Reforms× 2nd Survey	-0.78**		-0.86**		-0.75*		-0.78*	
	(0.40)		(0.41)		(0.43)		(0.43)	
Number of Reforms× 2nd Survey		-0.58**		-0.61**		0.37***		0.39***
		(0.24)		(0.25)		(0.12)		(0.12)
Dalit			0.46***	0.47***			0.41***	0.41***
			(0.17)	(0.17)			(0.09)	(0.09)
Backwards Caste			-0.22	-0.22			0.22**	0.22**
			(0.20)	(0.20)			(0.09)	(0.09)
Brahmin Caste			0.02	0.02			-0.37***	-0.36**
			(0.31)	(0.31)			(0.14)	(0.14)
Male			0.11	0.11			0.08	0.08
			(0.16)	(0.16)			(0.07)	(0.07)
Hindu			-0.47*	-0.46*			0.03	0.04
			(0.27)	(0.27)			(0.16)	(0.16)
Muslim			-1.02***	-1.01***			-0.09	-0.07
			(0.39)	(0.39)			(0.18)	(0.19)
Farm Laborer/Cultivator			0.12	0.12			0.22***	0.21***
			(0.16)	(0.16)			(0.08)	(0.08)
Education			-0.23**	-0.23**			-0.22***	-0.22***
			(0.09)	(0.09)			(0.04)	(0.04)
Rural			0.58**	0.58**			-0.20**	-0.18**
			(0.23)	(0.23)			(0.09)	(0.09)
Political Interest			0.09	0.09			0.21***	0.21***
			(0.08)	(0.08)			(0.05)	(0.05)
Aged 35 or Less			0.02	0.01			0.18***	0.18***
			(0.13)	(0.13)			(0.06)	(0.06)
N	6455	6455	6455	6455	5402	5402	5402	5402
States	15	15	15	15	15	15	15	15
State and Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Log Lik.	-1029.22	-1028.26	-1004.99	-1004.13	-3059.13	-3056.20	-2995.82	-2992.76
χ^2	89.33***	91.27***	137.79***	139.52***	1026.46***	1032.31***	1153.07***	1159.19***

Logit with standard errors in parentheses. State and year fixed effects included for all models. Two-tailed tests. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

22

a rural area dummy, a trichotomous indicator of political interest, and whether the respondent is under 36. Details and summary statistics about these data are available in the SM. While the results are similar to the results without controls, they suggest that the negative effect of land reforms (on land issues as MIP) are slightly larger after controlling for characteristics of the respondents.

I present the results of the difference-in-differences approach for the 1971 and 1985 survey questions on whether or not respondents approve of land grabs in Models 9-12 in Table 2. The results differ from the MIP question, since there is a sharp decrease over time in the likelihood of a respondent approving of land grabs in states that have not enacted any reforms. For instance (using Model 9), in states that did not enact any land reform, a respondent is fully 65 percentage points less likely to approve of land grabs in 1985 compared to 1971, and this effect is statistically significant. However, in Model 9 the marginal effect of enacting any reform is not statistically significantly different from zero. In fact, in Model 10—which differs from Model 9 by using the number of land reforms that have occurred—the marginal effect is positive and statistically significant; enacting land reform leads to about a 0.5 percentage point increase in the probability that a respondent will approve of land grabs in 1985 as compared to a state that did not enact any reforms. Last, Models 11 and 12 add individual-level control covariates, and tend to not change the substantive findings.

The individual-level analysis shows that land reform has a negative effect on those believing that land issues are the most important problem, and a positive—though small—effect on those supporting land grabs, even after accounting for unobservable state-specific characteristics. Over time, respondents are less likely to support land grabs, but they are only slightly less likely to feel that land issues are the MIP. In states that did not enact reforms, they are more likely to feel that land issues are the MIP. The control variables also shed light on *who* might benefit from reform; Dalits or farm laborers tend to be likely to answer yes to both the "inequality as MIP" and "approve of land grab" questions, while those who are Brahmin or more educated tend to be much less likely to answer in the affirmative.

Taken as a whole, this section shows that land reform issues remain relatively important over time, and that this decrease is not conditional on the passage of land reforms. Thus, it does not appear that repeated passage of land reforms influences sentiments on reform, which makes it an ideal tool for politicians to time strategically in order to win votes.

Discussion and conclusion

This article theoretically links the research on distributive politics and political budget cycles. Using data on Indian land reforms, I find evidence that policy passage is more likely to occur the year before an election. Policies are a clear signal to voters of incumbent competence, responsiveness to voter demands, and the desire to win over additional supporters. Individual-level survey evidence confirms that land reform issues remain salient over time, even when reforms have been passed in a state. In other words, passing land reform does not appear to diminish its effect as a tool used to win over voters.

Designed to win over rather than reward constituents, land reform is an ideal policy due to its low fiscal cost relative to other government policies, as well as its high visibility among landless rural voters. This supports earlier findings in Venezuela (Albertus 2012) and Kenya (Boone 2012) that examine the use of land reform as a distributive tool to increase political support. It also supports previous work that finds that reforms are politically salient (Teofilo and Garcia 2003). This salience is not limited to India; in 2003 an estimated 40 percent of the non-urban population in Asia lived under informal land ownership (Deininger et al. 2003). In Africa this figure is 50 percent. Other types of legislation may also contain a cyclical component, such as subsidy policies, or the announcement of large make-work projects.

Results in this article suggest that competition had only a slight effect on policy passage. However, there was evidence that ideology affects land reforms. Leftist par-

ties were more likely to implement reforms than parties of the center and the right. This suggests that this particular policy may be a partisan good, rather than a purely opportunistic one. To further examine whether opportunistic or partisan behavior is coming into play, a study of the implementation of land reform is needed. Policy implementation, carried out by bureaucratic agents, may differ across ideologies. Or, bureaucracies may be influenced by political considerations in choosing to regulate and enforce certain policies. For instance, in the context of land reform, bureaucratic agents may reward loyal supporters with faster implementation, or they might try to win over swing voters. In addition, future research may focus on the other side of the equation; do voters—especially poor ones—reward incumbents that have passed reforms?

In this article I have advanced a theory of political policy cycles. Using data on Indian land reform, I find evidence of a policy cycle that is timed to coincide with elections. These findings are complimented by individual-level evidence that suggests that land reforms are precisely the type of issue that matter to voters. Far from being a neutral, demand-based policy, I have argued that governments strategically pass land reforms as a signal to voters, and that they send this signal at an electorally-advantageous time. As scholars continue to disaggregate macroeconomic indicators into targeted spending areas designed to benefit and attract certain constituencies, the ability to use policy passage around elections as a signal to voters appears to be an important tool of governments.

References

Ahlquist, John S. 2010. "Policy by Contract: Electoral cycles, parties and social pacts, 1974–2000." *The Journal of Politics* 72(02):572–587.

Aidt, Toke S, Francisco José Veiga and Linda Gonçalves Veiga. 2011. "Election results and opportunistic policies: A new test of the rational political business cycle model." *Public Choice* 148(1-2):21–44.

Albertus, Michael. 2012. "Vote buying with multiple distributive goods." *Comparative Political Studies* 46(9):1082–1111.

Bandyopadhyay, D. 1986. "Land reforms in India: An analysis." *Economic and Political Weekly* pp. A50–A56.

Banerjee, Abhijit and Lakshmi Iyer. 2005. "History, institutions, and economic performance: The legacy of colonial land tenure systems in India." *American Economic Review* pp. 1190–1213.

Banerjee, Abhijit V, Paul J Gertler and Maitreesh Ghatak. 2002. "Empowerment and efficiency: Tenancy reform in West Bengal." *Journal of Political Economy* 110(2):239–280.

Barberia, Lorena G and George Avelino. 2011. "Do political budget cycles differ in Latin American democracies? [with commend]." *Economía* pp. 101–146.

Bardhan, Pranab and Dilip Mookherjee. 2010. "Determinants of redistributive politics: An empirical analysis of land reforms in West Bengal, India." *The American Economic Review* pp. 1572–1600.

Besley, Timothy and Robin Burgess. 2000. "Land reform, poverty reduction, and growth: Evidence from India." *The Quarterly Journal of Economics* 115(2):389–430.

Besley, Timothy and Robin Burgess. 2002. "The political economy of government responsiveness: Theory and evidence from India." *The Quarterly Journal of Economics* 117(4):1415–1451.

Besley, Timothy and Robin Burgess. 2004. "Can labor regulation hinder economic performance? Evidence from India." *The Quarterly Journal of Economics* pp. 91–134.

Boone, Catherine. 2012. "Land conflict and distributive politics in Kenya." *African Studies Review* 55(01):75–103.

Borgohain, Rooplekha. 1992. *Politics of land reforms in Assam*. Reliance Publishing House.

Chhibber, Pradeep and Irfan Nooruddin. 2004. "Do party systems count? The number of parties and government performance in the Indian states." *Comparative Political Studies* 37(2):152–187.

Cole, Shawn. 2009. "Fixing market failures or fixing elections? Agricultural credit in India." *American Economic Journal: Applied Economics* pp. 219–250.

Cox, Gary W and Mathew D McCubbins. 1986. "Electoral politics as a redistributive game." *Journal of Politics* 48(2):370–389.

Das, Sukumar. 1995. A critical evaluation of land reforms in India. In *Land reforms in India: An unfinished agenda*, ed. B.K. Sinha Pushpendra. Vol. 5 Sage Publications chapter 1, pp. 29–44.

Deininger, Klaus, Gershon Feder, Gustavo Gordillo de Anda and Paul Munro-Faure. 2003. Land policy to facilitate growth and poverty reduction. In *Land reform: Land settlement and cooperatives*, ed. P. Groppo. Vol. 3 United Nations Food and Agriculture Organization pp. 5–18.

DeRouen, Karl and Uk Heo. 2000. "Defense contracting and domestic politics." *Political Research Quarterly* 53(4):753–769.

Dixit, Avinash and John Londregan. 1996. "The determinants of success of special interests in redistributive politics." *Journal of Politics* 58:1132–1155.

Drazen, Allan and Marcela Eslava. 2006. "Pork barrel cycles." National Bureau of Economic Research Working Paper No. 12190.

Eashvaraiah, P. 1993. *The communist parties in power and agrarian reforms in India*. Delhi, India: Academic Foundation.

Eldersveld, Samuel J., Bashiruddin Ahmed and Dwaine Marvick. 2011. "Indian National Election Study, 1967, 1971, 1979, 1985." *ICPSR25402-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], http://doi.org/10.3886/ICPSR25402.v1* .

Hanstad, Tim, Robin Nielsen, Darryl Vhugen and T Haque. 2009. Learning from old and new approaches to land reform in India. In *Agricultural land redistribution: Toward greater consensus*, ed. Hans Binswanger-Mkhize, Camille Bourguignon and Rogier van den Brink. World Bank Publications chapter 9, pp. 241–263.

Joshi, Puran Chandra. 1975. *Land Reforms in India: Trends and Perspectives*. Allied Publishers Bombay.

Kayser, Mark Andreas. 2005. "Who surfs, who manipulates? The determinants of opportunistic election timing and electorally motivated economic intervention." *American Political Science Review* 99(01):17–27.

Khemani, Stuti. 2004. "Political cycles in a developing economy: Effect of elections in the Indian states." *Journal of Development Economics* 73(1):125–154.

Mechtel, Mario and Niklas Potrafke. 2013. "Electoral cycles in active labor market policies." *Public Choice* 156(1-2):181–194.

Munshi, Kaivan and Mark Rosenzweig. 2006. "Traditional institutions meet the modern world: Caste, gender, and schooling choice in a globalizing economy." *The American Economic Review* 96(4):1225–1252.

Nooruddin, Irfan and Pradeep Chhibber. 2008. "Unstable politics: Fiscal space and electoral volatility in the Indian states." *Comparative Political Studies* 41(8):1069–1091.

Philips, Andrew Q. 2016. "Seeing the forest through the trees: A meta-analysis of political budget cycles." *Public Choice* 168(3-4):313–341.

Rosenzweig, Mark R and Oded Stark. 1989. "Consumption smoothing, migration, and marriage: Evidence from rural India." *Journal of political Economy* 97(4):905–926.

Sáez, Lawrence and Aseema Sinha. 2010. "Political cycles, political institutions and public expenditure in India, 1980–2000." *British Journal of Political Science* 40:91–113.

Teofilo, Edson and Danilo Prado Garcia. 2003. Brazil: Land politics, poverty and rural development. In *Land reform: Land settlement and cooperatives*, ed. P. Groppo. Vol. 3 United Nations Food and Agriculture Organization pp. 19–39.

Tepe, Markus and Pieter Vanhuysse. 2014. "A vote at the opera? The political economy of public theaters and orchestras in the German states." *European Journal of Political Economy* 36:254–273.

Veiga, Linda Gonçalves and Francisco José Veiga. 2007. "Political business cycles at the municipal level." *Public Choice* 131(1-2):45–64.

Zaidi, A Moin. 1985. *Not by a class war: A study of Congress policy on land reforms during the last 100 years*. Publication Department, Indian Institute of Applied Political Research.