

## Theories of Economic Voting Revisited

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### I Introduction

In the last half of the twentieth century, following the works of V.O. Key (1966), Anthony Downs (1957), and numerous other authors, the scholarship on electoral studies has focused on verifying empirically what we have known intuitively for quite some time: the economic voting hypothesis.<sup>1</sup> “When economic conditions are bad, the citizens vote against the incumbent party”.<sup>2</sup>

Although survey research and case studies have successfully established a stable relationship between economic performance and government popularity or voter intent, aggregate cross-national analyses have failed to find a robust link between electoral and economic outcomes.<sup>3</sup>

The purpose of this research is to answer the following: Is there an economic vote function, and if there is, how do voters judge the economy?<sup>4</sup>

There is still no consensus in the literature regarding these questions. One line of argument is that voters punish bad economic performance and that their vote is a purely retrospective one (Downs 1957; Key Jr. 1966; Kramer 1971; Lewis-Beck 1988). The problem with these findings is that scholars have not been able to reproduce them in aggregate cross-national settings. Some scholars have argued that it has not been possible to observe economic voting in aggregate cross-national studies because there is no economic vote function (Cheibub and Przeworski 1999; Paldam 1991). Another group contends that we will only observe economic voting under some institutional and political settings (Powell and Whitten 1993) (Stokes 2002); others, do not dispute the relationship between elections and the economy, nor hold it contingent on other variables, but, they disagree on how voters judge the economy. Some of these studies consider voters as completely

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<sup>1</sup> The scholarship on this subject is substantial. In particular, see Kramer (1971), Hibbs (1982), Lewis-Beck (1980, 1988), Fiorina (1978, 1981), Kinder and Kiewiet (1979), Peltzman (1990), Paldam (1991), Remmer (1991), Powell and Whitten (1993), and Przeworski and Cheibub (1999). The economic voting hypothesis is also known as the responsibility hypothesis (Nannestad and Paldam, 1994).

<sup>2</sup> Lewis-Beck (1988)

<sup>3</sup> Two examples of failed attempts to find a robust and stable economic function are the works of Paldam (1991) and Przeworski and Cheibub (1999)

<sup>4</sup> The interest in finding an economic vote function stems from the implications that its non-existence would have for democracy. If voters do not punish bad economic performance through their ballots, then office holders would have little incentive to invest in prudent economic management. Under this scenario, the probability of reelection for the incumbent party would not depend on its economic performance. This is incompatible with one of the main characteristics of democracy: accountability. In a democracy, citizens can hold political leaders accountable through their vote. If voters are satisfied with the government's economic performance they can choose to reelect it; otherwise, they can vote for the opposition with the intent of punishing the incumbents for a bad economic performance. The vote, as an accountability instrument, creates the proper incentive for office-seeking politicians to implement sound economic policy.

myopic individuals (Kramer 1971; Paldam 1991), while others regard them as sophisticated individuals that can evaluate longer periods of economic performance (Peltzman 1990). Finally, some scholars contend that voters' vision will depend on the "noisiness" of what they have experienced in the past- they will be short sighted if they experienced great economic variance, and longer sighted if these past variance was low, this is the Bayesian setting (Magaloni 1997).

The purpose of this proposal is to test whether there is an economic vote function, whether it is contingent on non-economic variables, and, finally, whether voters are myopic or not. My hypothesis is that there is a relationship between economic performance and electoral outcomes, and that the reason why earlier cross-national studies did not find it, lies in the way the econometric models were specified. I also believe that voters are sophisticated; sometimes they are myopic, and other times they are not, however I still do not know how to account for this, so testing the different economic voting theories would give me a clearer idea about this.<sup>5</sup>

In the next section I present some of my preliminary findings (which suggest that there is an economic vote function and that voters are more sophisticated than what conventional wisdom suggests). I will also briefly describe the data and the dependent variable I used. I have attached in the appendix the specification of the economic variables (which is important because some variables operationalize myopic measures of the economy and others, longer visions), descriptive statistics, and a model controlling for the institutional/political variables.

## **II Preliminary Findings**

The purpose of this proposal is to present a model that improves on some of the weak points of recent models of economic voting.<sup>6</sup>

My main hypothesis is:

The probability of reelection of the incumbent party decreases when the economic situation deteriorates, and increases when the economic performance is "good".

The model incorporates executive elections, for president or Prime Minister, in 41 electoral democracies<sup>7</sup> from 1980, or since the country had its first democratic elections after transitioning

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<sup>5</sup> Here is where I need the most methodological help

<sup>6</sup> I will suggest that even though the institutional context is important, the relationship between economic performance and vote is not contingent on it.

<sup>7</sup> The criteria I used to classify my cases as electoral democracies is the one established by Freedom House. Freedom House uses a 1 to 7 scale, where 1 represents the most free, and 7 the least free (this scale is derived from the average each country gets with respect to its political and civil rights) The index is as follows: free (1-2.5), partially free (3-5.5), and not free (5.5-7) In my sample I only incorporated free countries, and in some cases countries that in one point of their history, were classified as partially free, up to an average of 4.5. However, all my cases are considered electoral democracies by Freedom House.

from an authoritarian regime or since I had economic data, through 1998.<sup>8</sup> The countries under study are:

Parliamentary Democracies: Austria, Australia, Belize, Belgium, Canada, Denmark, Finland,<sup>9</sup> Germany, Greece, Ireland, Israel, Italy, Japan, Netherlands, Norway, New Zealand, Portugal, Spain, Sweden, United Kingdom.

Presidential Democracies: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, France,<sup>10</sup> Guatemala, Honduras, Mexico, Nicaragua, Panama, Philippines, South Africa, South Korea, United States, Uruguay, Venezuela .

***Dependent Variable: Probability of Reelection of the incumbent party***

Almost all of the previous economic voting models take as the dependent variable the change in votes received by the incumbent party in the legislative elections compared to the last elections. Thus, these models usually use first differences. Although losing votes can be interpreted as a form of punishment, it does not necessarily imply that the incumbent party loses power. It may lose some votes, and still be able to retain power. The fact that governments may produce bad economic outcomes -and still manage to retain power- questions the strength of the punishment and the pervasive incentives this situation may create. Additionally, it is not the same to lose 5% of the votes in an election when the party won 65% of the vote in the last election, to lose 5% of the vote in a situation where the party won the last election with 51% of the vote. It is obvious that in the first case, supposing we are in a bi-party system, the party retains power, but in the second it loses it. Probably the incentives for the party are different under these two scenarios, even if the percentage of votes lost is the same. The only way to ensure that the parties have incentives to perform well is if they perceive a real threat of losing power. Getting thrown out of office is the worst punishment that a party can receive by the electorate. This is the ultimate accountability measure. Taking this into consideration, I use as my dependent variable the reelection or non-reelection of the *incumbent party*. This is a dichotomous variable that takes the value of one if the incumbent party (the president or the prime minister's party, no matter if it is a coalition government or one party government) gets reelected, and takes the value of zero if another party gets elected.

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<sup>8</sup> Except for Mexico where I also incorporated the 2000 presidential election.

<sup>9</sup> Even though in the period studied Finland has a semi-presidential system I classified it as a parliamentary one, because it functions much more as a parliamentary democracy than as a pure semi-presidential system. The prime minister has much more power than the president.

<sup>10</sup> France has a semi-presidential system but I classified it as a presidential system because in the 1981, 1988, and 1995 presidential elections, the president's party had the majority in the Legislature, thus, making it function as a presidential regime. Still, it is important to mention that during a period of time, the president lost power to the prime minister, because its party lost the majority in the Legislature. This happened from 1986 to 1988, from 1993 until 1995, and since 1997 until 2002.

The main argument of this paper is that governments are held accountable for their economic performance. Thus, the probability of reelection of the incumbent party increases if the economic performance of the government improves, and decreases if the economic performance declines.

**Table 1. Myopic or Replication Model**

**Logit Analysis: Probability of Reelection of the Incumbent Party**

Independent Variables	Replication Model	
	Coefficient	Std. Error
Constant	.7052**	.3128
Myopic GDP/cap growth	.0597	.0450
Myopic Inflation	-1.1109***	.3073
***p<.01 N=184		
**p<.05 *p<.10 Overall Prediction: 64.13 %		

Dependent Variable: Incumbent Party Reelection=1; Non reelection=0

Insert Graphs 1.1 and 1.2 about here

**Table 2 Non Myopic Model**

**Logit Analysis: Probability of Reelection of the Incumbent Party**

Independent Variables	Long Term Model	
	Coefficient	Std. Error
Constant	-.2522	.1705
▲ GDP/cap growth rate	.1221*	.0640
Non-myopic Inflation	-.8223**	.3323
***p<.01 N=180		
**p<.05 *p<.10 Overall Prediction: 60.56%		

Dependent Variable: Incumbent Party Reelection=1; Non reelection=0

Insert Graphs 2.1 and 2.2 about here

**Table 3. Basic Model (Mixed Model)**

**Logit Analysis: Probability of Reelection of the Incumbent Party**

Independent Variables	Basic Model	
	Coefficient	Std. Error
Constant	.8492***	.2981
▲ GDP/cap growth rate	.1587**	.0656
Myopic Inflation	-1.1202***	.3081
***p<.01		N=182
**p<.05 *p<.10		Overall Prediction: 67.03 %

Dependent Variable: Incumbent Party Reelection=1; Non reelection=0

Insert Graphs 3.1 and 3.2 about here

### III. Agenda for this Workshop

Given that there is reasonable evidence that the economy has an effect on elections, I would like to concentrate on testing (keeping my dependent variable as it is) three economic voting models that differ on the way they explain voters' length of vision: a) the Bayesian one: voters have different lengths of vision that depend on the weigh they assign to recent economic performance. This weigh in turn depends on the level of economic variance they observed in the past; b) the Economic one: voters have different lengths of vision because they judge different economic variables in different ways i.e. they are short sighted towards increases in inflation because changes in inflation are felt immediately (lowers purchasing power, wages) and are evenly distributed, and they are longer sighted towards decreases in growth because it takes more time to feel the impact of growth changes and because these may not be evenly distributed (I have no idea how to go on about testing this), and finally c) The rational expectations one (Peltzman 1990): voters are long sighted and will only punish "unexpected" changes in the economy.

Testing these models, or at least testing one, is what I would like to do in this workshop

## **Appendix**

### ***Economic variables***

In order to study the effect that the economic outcomes have on the vote, I considered two types of models: the myopic and the non-myopic. The first one assumes that voters are short sighted and only care for the present situation and immediate past. In these models voters are assumed to have a short-term memory and myopic stance with respect to the economy. On the other hand, the second model assumes that voters are not that short sighted and do care about the past. In these models voters take into account the immediate economic past previous to the election, but compare it to the historical economic performance of the nation. The difference between these two models lies in how I measured the economic variables of Growth per capita and Inflation. As I will later show, voters react differently to both economic variables. With respect to inflation, voters are much more myopic than with respect to growth. This is not surprising given that a rise in the prices has a generalized and immediate effect on the people i.e. lowers her purchasing power, whereas a decrease or increase in growth sometimes is not evenly distributed among the population and its impact may not be immediate. See attachment for the specification<sup>11</sup>:

1. **Myopic Inflation.** This variable measures the logarithm of the average rate of inflation of the last two years previous to the election. Following the main hypothesis, I expect that higher inflation rates decrease the probability of reelection of the incumbent party. On the contrary, if the average inflation is low, the probability of reelection of the incumbent party increases, so I expect a negative sign on the coefficient.
2. **Non-myopic Inflation.** This variable measures the difference between the logarithm of the average rate of inflation of the last two years previous to the election and the logarithm of the mean average rate of inflation of the ten years preceding that current government. For example, if we were to study the non-myopic inflation effect on the 2000 US election, this variable would measure the difference between the average inflation rate that happened from the year 1998 through 2000, and the average mean rate of inflation from 1986 through 1995. My hypothesis is that this variable will have less of an impact than the myopic inflation.
3. **Myopic GDP per capita growth.** This variable measures the average growth rate observed in the two years previous to the election. I expect a positive coefficient sign.

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<sup>11</sup> All the economic data was extracted from the IMF database and from the “World Development Indicators (WDI)” World Bank database.

4. **Change in GDP per capita growth.** This variable measures the difference between the mean growth rate observed from the moment since the party took power until new elections took place and the mean growth rate of the ten years preceding that government. As one can see, this is a long term variable because it compares present growth rates with an historical growth rate. Contrary to earlier models that considered growth as a myopic variable, I considered GDP per capita growth as a long term variable, assuming that voters are not myopic when it comes to judging growth performance. I did this for several reasons. I took the idea of using a long-term growth variable from the work of Magaloni (1997). In studying the Mexican elections, Magaloni uses a retrospective electoral model based on Bayesian principles, where *past* and *present* information determine the voter's decision with respect to the incumbent performance. In her model, voters estimate the future incumbent economic performance based on its historical and present performance. In this context, voters are not myopic when they judge the performance of the growth rate. They update their beliefs with the latest government economic performance, but if they have seen a stable performance in the past, recent outcomes will not matter much when they vote (Magaloni 1997). Another reason I chose to measure GDP per capita growth rate as a long-term variable is because economic growth cannot be as easily manipulated by politicians as other economic variables. While the rate of inflation (especially in the cases where the degree of central bank independence is very low) depends on the government monetary policies, the growth rate depends on other factors that may not be as easily manipulated, and that require more time to change and to have an effect. Thus, as the economic vote function predicts, I expect that increases in the GDP per capita growth rate will increase the probability of reelection of the incumbent party. The expected coefficient sign is positive.
  
5. **Wealth (Income).** This variable controls for the differences in wealth across the countries. It measures the logarithm of GDP per capita of every country included in the model in the year 1990. As one can observe (chart 1), there are large differences in wealth across the countries studied. This fact may bias the results of the model because it could be the case that richer countries experience smaller fluctuations in inflation and economic growth than poorer countries. It is well known that poor countries are almost always the ones that experience the highest fluctuations in the inflation rate, or large decreases in growth. This could lower the probability of reelection of the incumbent party in poor countries.

**Chart 1. Descriptive Statistics of the Economic Variables**

	N	Minimum	Maximum	Mean	Std. Deviation
Myopic Inflation (%)	201	.02	7487.61	108.13	722.55
Non-myopic Inflation (%)	199	-598.85	7465.98	82.02	724.11
Myopic GDP/cap growth	189	-12.18	32.38	1.58	3.95
▲ GDP/cap growth rate	186	-7.94	7.27	-0.20	2.65
▲ GDP/cap growth rate (adjusted)	186	-13.94	14.48	-0.29	3.65
Wealth (GDP/cap in 1990 US Dollars)	248	320	26400	11867	9019.65

**Chart 2**

	Mean Inflation	Mean GDP/cap growth
Right wing parties	<b>116.58%</b>	<b>-0.24%</b>
Left wing parties	<b>99.90%</b>	<b>-0.18%</b>

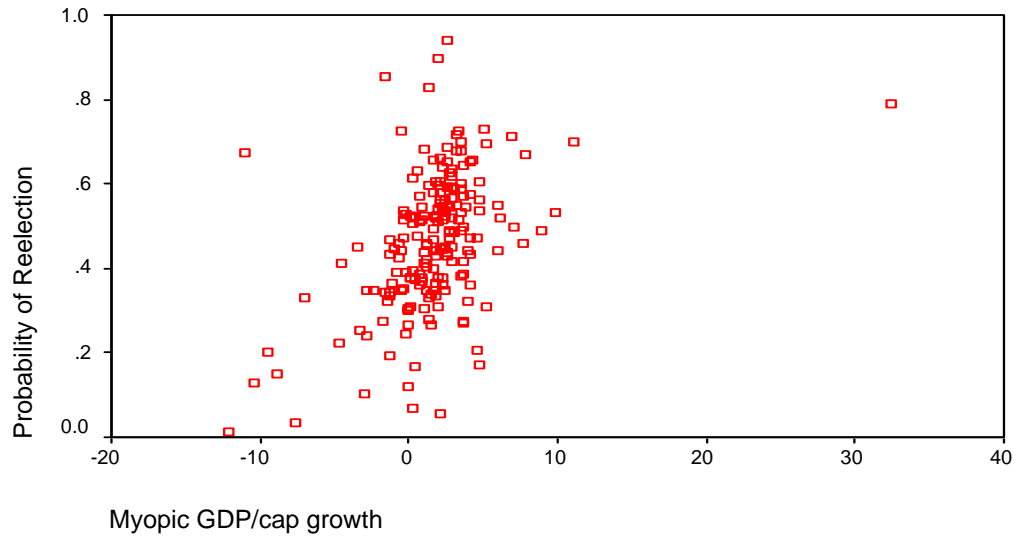
**Table 4 Logit Analysis: Probability of Reelection of the Incumbent Party**

Independent Variables	Expanded Models					
	Model 4.1		Model 4.2		Model 4.3 (19 industrialized democracies)	
	Coeff.	Std. Error	Coeff.	Std. Error	Coeff	Std Error
Constant	-2.1985	1.7797	-.9800	1.7848	-.9461	9.6022
▲GDP/cap growth rate	.2225***	.0743	.2290***	.0748	.3689**	.1529
Myopic Inflation	-.8906**	.3495	-1.9965***	.7551	-.0659	.0540
Bicameralism	.2247	.3514	.2392	.3531	-.5615	.6319
Minority Government	-.8569**	.3748	-.8564**	.3771	-1.6166**	.6555
# Parties/Coalition	-.3433**	.1728	-.3687**	.1775	-.4604**	.2130
Electoral System(Majority)	-.4541	.4716	-.5691	.4798	-1.2322*	.6747
Right-Wing Ideo	-.9692***	.3506	-2.2065***	.7967	-1.0286**	.5024
· Ideology*Inflation			1.4293*	.7969		
Years of Demo.	.0013	.171				
Central Bank Ind.					2.1133	1.8880
Wealth	.8989*	.5446	.8673**	.4042	.5453	2.3269
***p<.01	N=181		N=181		N=101	
**p<.05 *p<.10	Overall Prediction: 69.61%		Overall Prediction: 71.27%		Overall Prediction: 71.29%	

## Myopic Model Graphs 1.1 and 1.2

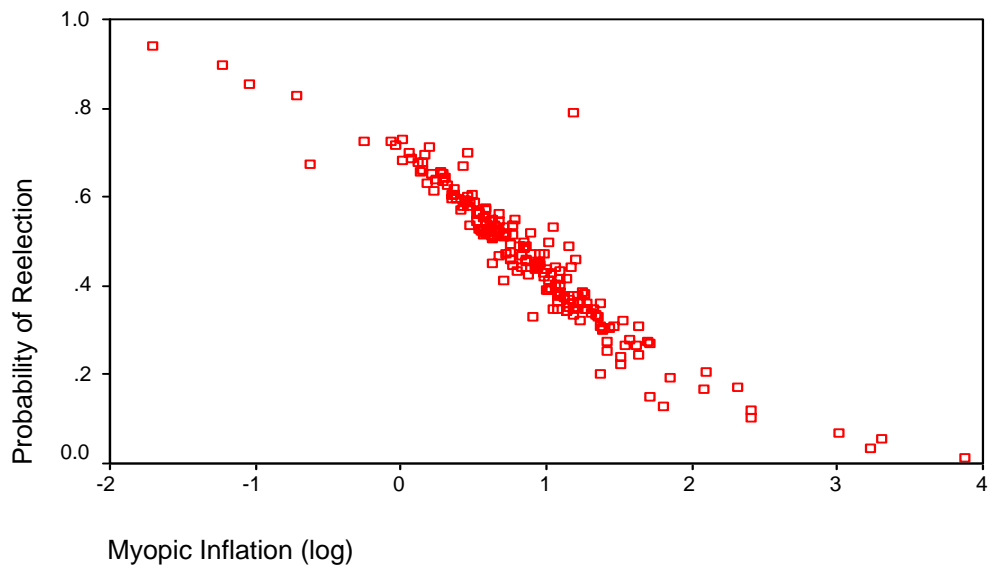
### Probability of Reelection of the Incumbent Party

Myopic Model

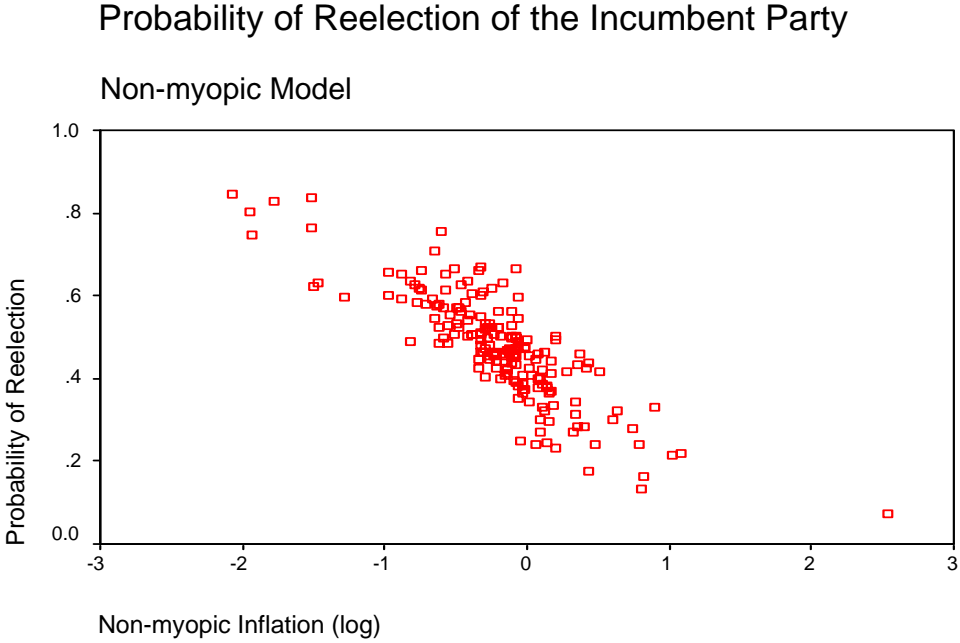
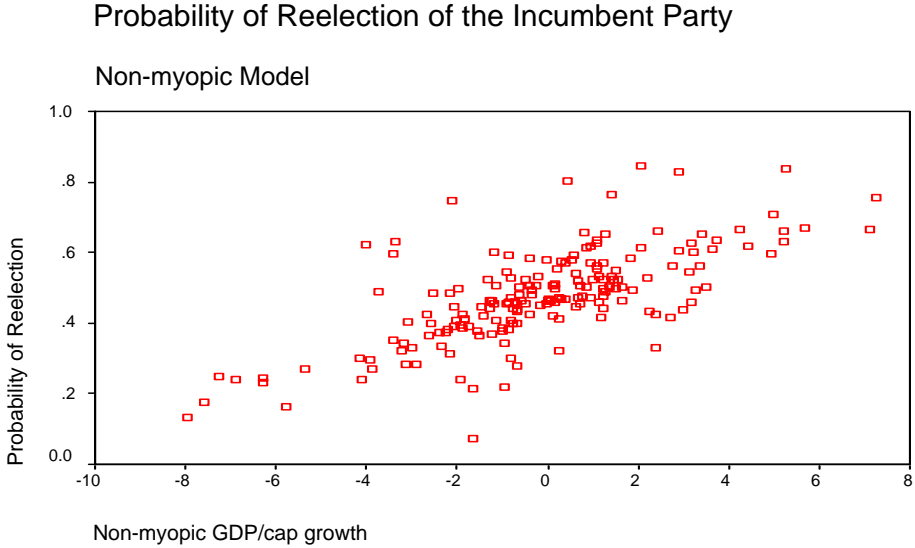


### Probability of Reelection of the Incumbent Party

Myopic Model



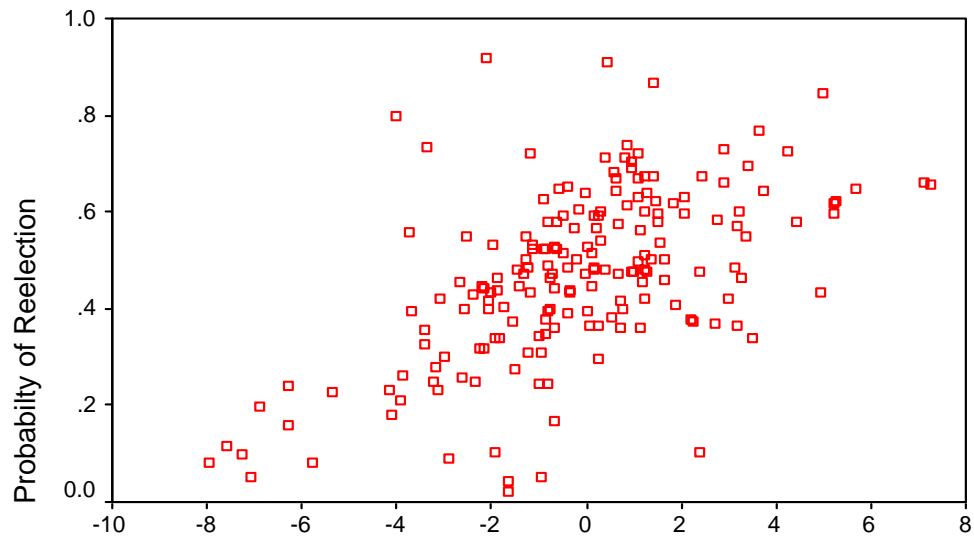
**Non-myopic model Graphs 2.1 and 2.2**



## Basic Model Graphs 3.1 and 3.2

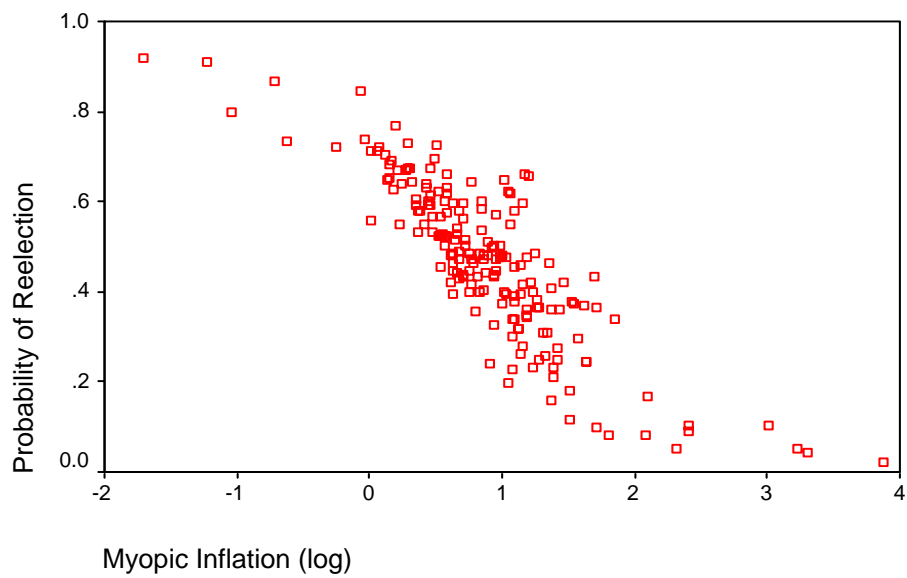
### Probability of Reelection of the Incumbent Party

Mixed Model

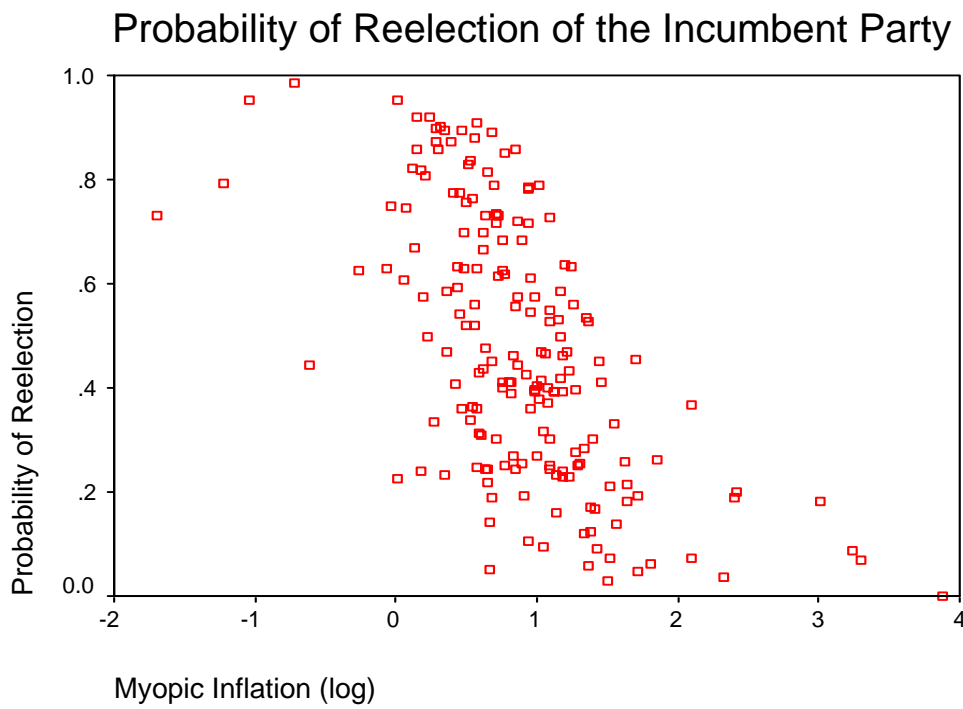
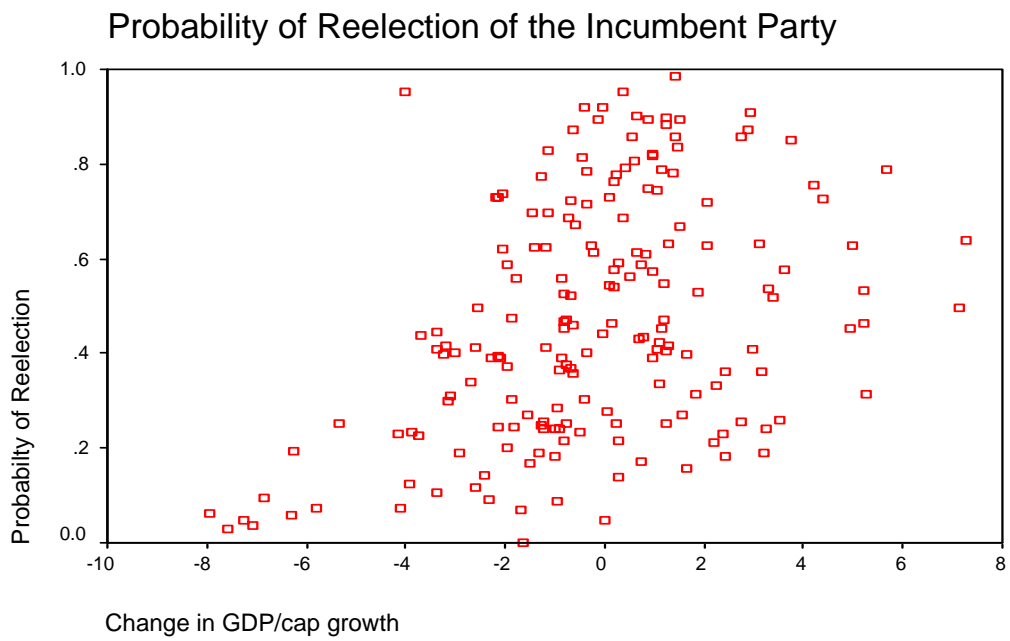


### Probability of Reelection of the Incumbent Party

Mixed Model



### Model 4.2 Graphs (controlled for the institutional context)



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