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Too close to call: Growth and the cost of ruling in US presidential elections, with an application to the 2012 election

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Abstract. The note briefly outlines a new model for the explanation of US presidential elections, founded on (a) recent economic growth and (b) a measure of what may be called “the cost of ruling”. The former is based in changes in real disposable income for the period following a mid-term election, while the latter combines factors of incumbency and terms-in-office. The model is applied to data from the US presidential elections 1932-2008 and has considerable explanatory power for the variation in the incumbent party’s candidate’s share of the two-party vote ($R^2=0.74$). The model is controlled against a number of other frequent explanations and is found to be quite robust. When augmented with approval ratings for incumbent presidents, the explanatory power increases to 83 pct. and only incorrectly calls one of the last 15 US presidential elections. Applied to the 2012 election as a forecasting model the prediction is that President Obama will win 49,6 pct. of the two-party vote.

Keywords: Economic voting; US presidential elections.

JEL-code: D72.

Introduction

Recent decades has witnessed an explosion in the number of statistical studies by economists and political scientists to either explain or forecast US presidential elections. The present research note adds one more such model.

A “Growth and cost-of-ruling” model

We suggest the following basic model:

(1) *Dependent variable*: The share of the two-party vote won by the candidate running as the presidential candidate of the party occupying The White House.

(2) *Independent variables*:

- a) A measure of economic growth in the period from the mid-term election to the next presidential election. The reasoning is a variation of the argument usually found in the economic voting literature: Voters reward or punish in the incumbent party on the basis of how the economy is doing. However, as opposed to many other models we do not include any arbitrarily selected observation points (say, e.g., 2nd quarter of the election year) or arbitrarily weighted averages. Rather, we simply measure change in average real disposable income in the period after the mid-term election assuming that the voters already have voiced their opinions on that prior occasion.
- b) A measure of “cost of ruling”, involving both incumbency and the terms-in-office. On the one hand, it is a hard fact of US presidential politics, that incumbents running for re-election rarely lose; the exceptions in modern times being 1992, 1980 and 1932. On the other hand, it is also a solid observation that it is rare that a party holds power for more than two terms in a row; 1989-1993 and 1941-53 being the only examples nowadays and with the Roosevelt/Truman years being the only modern example of plus-three consecutive terms. These two, somewhat opposed factors, are easily explained: It is, *ceteris paribus*, good to be the incumbent for a large number

of reasons; on the other hand, problems and blame may also accumulate the longer a party holds power. The measure is constructed by counting the number of terms in office of the incumbent party minus 1 if the candidate is an incumbent. So, for example, for 1980 Carter receives a 0, since the Democrats had held the White House only one term and Carter was the incumbent; in contrast for 1968 and 2008 Humphrey and McCain both received a 2, since their parties had had the presidency for two terms and they weren't incumbents.¹

Both independent variables share the fact that they are objective and exogenous: No polling data or factors endogenous to, say, the election campaign are included. Including only two independent variables (other than any controls) is a necessity given the small number of observations where we are able to measure economic conditions.

Application of the model for elections 1932-2008

Let us apply this base model to the US presidential elections 1932-2008, using ordinary least squares (OLS) multiple regression analysis. Doing so we get the results presented in Table 1. As is evident, the model both has high face value and seems fairly robust: All coefficients, across different versions, are statistically significant and have the expected signs. The model also has considerable explanatory power, explaining 70-74 percent of the variation in vote shares, albeit with standard errors ranging from 3.2 to 3.3.

¹ For the present purposes vice presidents who have assumed the presidency are counted as "half" incumbents (Truman in 1948, Johnson in 1964, Ford in 1976).

Table 1. Growth and Cost-of-ruling 1932-2008, base model with various time periods.

Variables	(1) Base model, 1932- 2008	(2) Base model, 1948- 2008	(3) Base model, 1952- 2008
Constant	49.17**** (29.84)	46.54**** (19.62)	46.87**** (20.32)
Economic growth	0.98**** (5.26)	1.31**** (4.13)	1.28**** (4.17)
Cost of ruling	-1.52** (-2.57)	-1.36** (-2.22)	-1.69** (-2.64)
F-statistic	24.36****	15.15****	17.13****
R ²	0.74	0.70	0.74
S.E.E.	3.30	3.30	3.19
N	20	16	15

* $p \leq 0.1$; ** $p \leq 0.05$; *** $p \leq 0.01$; **** $p \leq 0.005$

Controlling for other factors

Obviously, with 74 percent of the variation explained for the years 1932-2008 and standard errors of 3.3, there is still room for other factors to play a role. For that reason we test the Growth and Cost-of-Ruling model's robustness by controlling for other factors. Table 2 contains the 1952-2008 base model with only economic growth and cost of ruling included (model 3), as well as the results of series of alternative specifications. In each case, only one control variable is considered at the time due to the low total number of observations (15).

Table 2. Growth and Cost-of-ruling 1952-2008, with alternative control variables.

Variables	(3) Base model, 1952-2008	(4)	(5)	(6)	(7)	(8)	(9)
Constant	46.87**** (20.32)	37.97**** (11.68)	45.87**** (18.27)	44.88**** (17.22)	47.08**** (18.98)	46.81**** (15.63)	46.66**** (19.69)
Economic growth	1.28**** (4.17)	0.83** (3.07)	1.38*** (4.27)	1.31**** (4.45)	1.30*** (3.99)	1.29*** (3.23)	1.35*** (4.10)
Cost of ruling	-1.69** (-2.64)	-0.94* (-1.77)	-0.98 (-1.20)	-1.57** (-2.53)	-1.69** (2.53)	-1.70*** (-2.45)	-1.77** (-2.67)
Approval ratings	--	0.21*** (3.22)	--	--	--	--	--
War casualties	--	--	-0.02 (-1.00)	--	--	--	--
Divided government	--	--	--	2.44 (1.44)	--	--	--
Party	--	--	--	--	-0.60 (-0.34)	--	--
Negative trend	--	--	--	--	--	0.06 (0.98)	--
Stocks	--	--	--	--	--	--	-0.07 (-0.72)
F-statistic	17.13****	23.85****	11.75***	13.12****	10.61****	10.47****	11.14****
R ²	0.74	0.87	0.70	0.78	0.74	0.74	0.75
S.E.E.	3.19	2.34	3.19	3.06	3.32	3.33	3.26
N	15	15	15	15	15	15	15

* $p \leq 0.1$; ** $p \leq 0.05$; *** $p \leq 0.01$; **** $p \leq 0.005$

One model (4) adds Gallup's presidential approval ratings from last week of October in the election year, assuming that there will be a positive relationship. Approval ratings are, of course, not the "causes" of election outcomes but rather an expression of satisfaction with the incumbent party's president and may to some extent be hypothesized to catch factors not measurable by economic conditions alone.

Another model (5) adds Douglas Hibbs' measure of cumulated US war casualties in US-initiated invasions abroad (Hibbs 2000; Hibbs 2008), assuming that any effect will be negative due to the unpopularity of such human costs. A third model (6) adds a dummy for whether another party controls one or more chambers of Congress, assuming that any effect will be positive, since "divided government" and "gridlock" gives the governing party an "enemy" to run against. A fourth model (7) adds a dummy for whether the incumbent party is the GOP in order to control for any partisan effects. A fifth model (8) adds a variable counting the number of quarters with negative growth in real disposable income in the election year, in order to control for trends leading up to the election. Finally, a model (9) adds change in Dow Jones Industrials in the first nine months of the election year, assuming that any effect will be positive.

As the results in Table 2 demonstrate the variables of the base model are quite robust to the control for other factors: The signs of the two coefficients never change, and the variables of the base model usually remain statistically significant (with the exception of the cost-of-ruling in one case, model 5). With the exception of presidential approval ratings (model 4) none of the control variables come out statistically significant.

Using the latter we have a model with high explanatory power, both in terms of winners and variation explained.² Figure 1 shows the correlation between the predicted vote shares and the actual vote shares for the candidates running for the incumbent party. The model's retroactive forecasts only err once in predicting the right popular vote winner out of the 15 elections 1952-2008: Gerald Ford's defeat with 48,95 pct. of the two-party vote in 1976. For the remaining 14 elections five popular vote losers were correctly predicted and eight popular vote winners similarly, while one election result essentially was too close to call (1960).

² The model bears some resemblance to one of the "Time for Change"-models developed by Alan Abramowitz, which includes (a) a measure of economic growth; (b) a dummy for whether or not an incumbent is running or not; (c) presidential approval ratings (Abramowitz 2008). There are differences though, as the present model includes growth in real personal disposable income for the whole post-midterm period and also includes terms-in-office together with incumbency. More recently Abramowitz has added a fourth variable measuring "polarization", but with the possible risk of some statistical over-determination of the model.

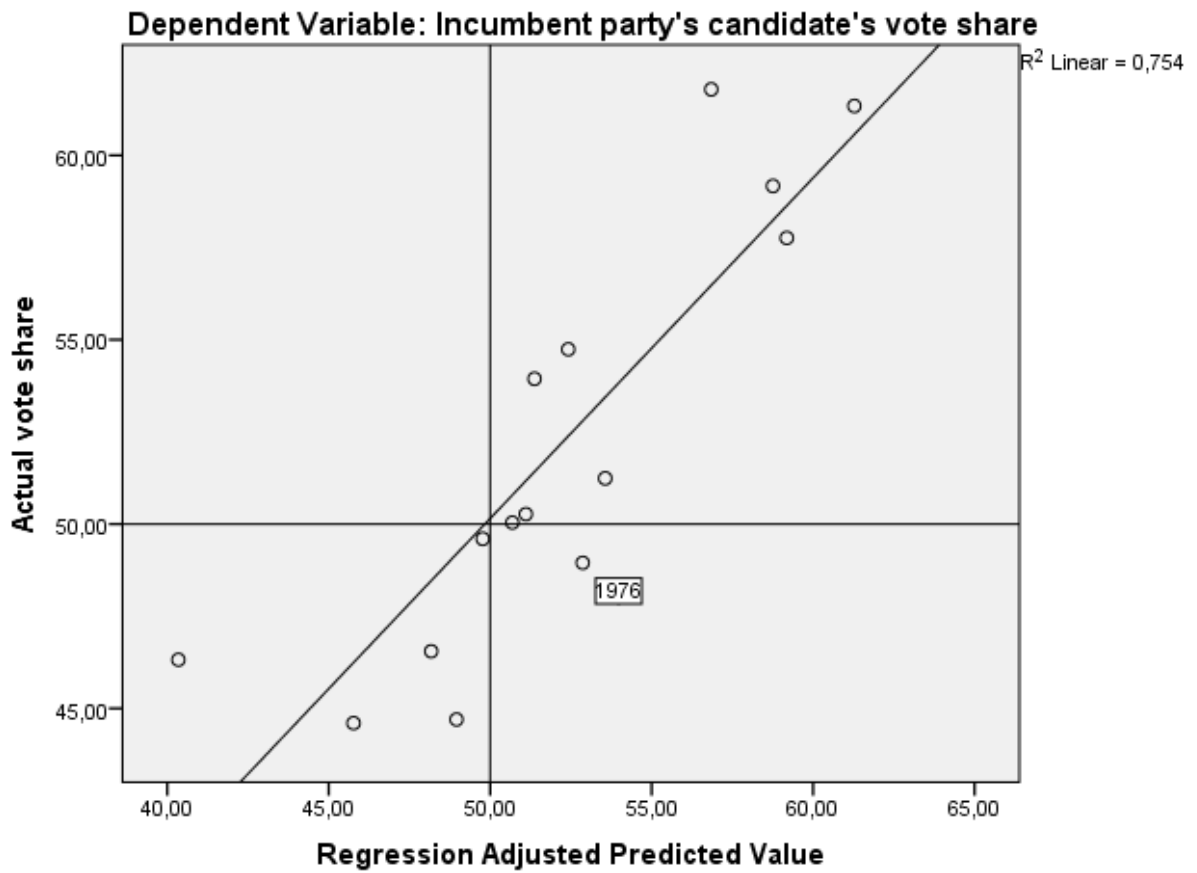


Figure 1. Correlation between predicted and actual vote shares for incumbent party's candidate 1952-2008.

Altogether the model explains approximately 87 pct. of the variation in the incumbent party's candidate's share of the two-party vote.

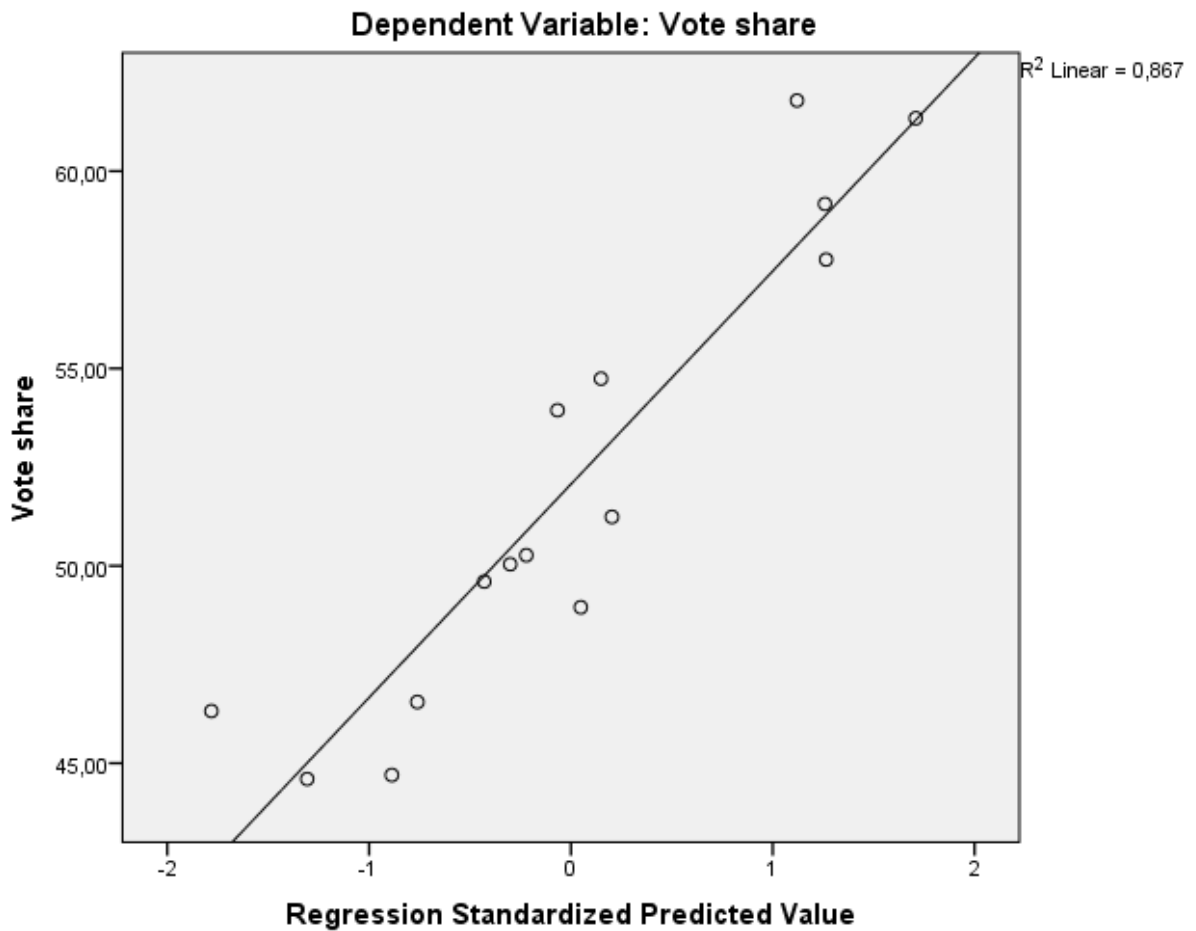


Figure 2.

A perspective on the 2012 election

Using data for growth in real disposable income for the quarters following the mid-term election (0.75 for 2011-12), a measure of the cost of ruling (0), and approval ratings at the end of October 2012 (51 pct. positive), the expanded model forecasts that President Obama will win 49.6 percent of the two-party vote. Without the inclusion of approval ratings the model predicts Obama to win only a more modest 47.8 percent of the two-party vote. Given the size of

the models' standard errors, this essentially means that the election is too close to call with any significant degree of probability.

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