

2-1996

# The Rationality of Economic Voting Revisited

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## Publication Info

Published in *Journal of Politics*, Volume 58, Issue 1, 1996, pages 224-236.

<http://journals.cambridge.org/action/displayJournal?jid=JOP>

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## RESEARCH NOTES

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### *The Rationality of Economic Voting Revisited*

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One aspect of rationality involves the prospective or retrospective outlook of voters; another concerns voters' knowledge of feasibility constraints. Rationality is usually taken to mean that agents are both forward-looking and aware of constraints, but it is not possible to associate voter rationality with any particular behavioral regularity unless objectives and constraints are specified. We **examine voter rationality using post-World War II U.S. national election data**. Our evidence cannot reject the view that voting is rational. Presidential and congressional election outcomes reflect marginal voters' awareness of economic constraints and the implications of vote choices for their long-term economic well-being. Particularly, the voters are more sensitive to permanent than cyclical economic growth when these two components are distinguished by a decomposition that finds a large, stochastic trend in the output process. The concern with permanent growth would encourage governments to adopt policies that promote long-term rather than short-term income gains.

**T**he ability of representative democracies to satisfy the wants and needs of voters ultimately depends on the quality of individual voters' judgments. Although democracies may not always produce optimal results even when voters are individually optimizing, few would doubt that outcomes would be worse if voters were poorly informed, illogical, or manipulable. Scholars have devoted considerable efforts to the task of characterizing the extent of voter rationality.<sup>1</sup> According to the "rational choice" paradigm, rationality implies goal-directed, optimizing behavior. The rationality assumption neither prescribes nor prohibits any particular behavioral regularity. Rather, the assumption imposes the condition that behavior should enhance the achievement of goals subject to feasibility constraints. Behavior deemed rational under one set of constraints might instead be regarded as irrational in other contexts. Thus, rationality is contingent on institutional arrangements forming feasibility constraints within which behavior takes place.

Existing studies examining voter rationality have each relied on single particularistic assumptions about the underlying institutional structure without exploring the implications of other alternative assumptions. Since there exists no consensus

<sup>1</sup>Macro political-economic studies examining voter rationality include Alesina, Londregan, and Rosenthal (1993); Alesina and Rosenthal (1989); Chappell and Keech (1985); MacKuen, Erikson, and Stimson (1992); Peltzman (1990); and Suzuki (1991).

on assumptions, it is risky to evaluate the rationality hypothesis based solely on any single assumption. Our purpose is to test the rationality hypothesis using alternative assumptions and to offer further evidence that might distinguish rational and naive voting. In what follows, we hypothesize that rational well-informed voters would reward *permanent* income gains more than *cyclical* gains. We estimate aggregate vote functions for U.S. national elections in which permanent and cyclical components of income growth appear separately as explanatory variables. If votes are more responsive to the permanent component, this would favor the rational voter hypothesis.

In examining voter evaluations of macroeconomic conditions, researchers have highlighted two dimensions of rationality. First, rationality requires that voters be forward-looking when they cast ballots. Thus, models distinguishing *prospective* from *retrospective* voting are informative about voter rationality. But, since voters necessarily must make their prospective forecasts on the basis of current and past data, distinguishing prospective and retrospective orientations is intrinsically difficult.<sup>2</sup> In contrast, the second dimension of rationality concerns voters' awareness of feasibility constraints. Most studies of voting behavior have ignored the issue of feasibility constraints, and have implicitly assumed that such constraints are irrelevant for voters. Thus, voters are viewed as rewarding economic growth and punishing inflation, while assuming that outcomes for these two variables are independently controllable by policymakers.

For our purposes, it is useful to think of economic knowledge as describing the feasibility constraints that relate permanent and temporary changes in income, or output, to one another. Permanent output change is driven by productive capacity (i.e., the aggregate production function and its movements over time) in the economy. Manipulating aggregate demand can at best produce temporary output gains, while supply shocks often have long-lasting impacts on output (Nelson and Plosser 1982). Although supply shocks are referred to as *technology* shocks, there is ample room for government to influence them (Barro 1990; King and Rebelo 1990). Governments make decisions about regulatory policies, the protection of property rights, the provision of public infrastructure, and levels of marginal tax rates and subsidies. Providing the proper dose of public intervention while maintaining private incentives for work and saving is an important governmental task. Those governments that succeed produce positive technology shocks, while those that fail produce negative ones.

It is unquestionably difficult for the electorate to monitor the government's microeconomic policy programs directly. For voters, it is much easier to observe and

<sup>2</sup>MacKuen, Erikson, and Stimson (1992) used aggregate survey measures of retrospective and prospective economic evaluations to explain presidential approval, and found results which favor the importance of prospective evaluations. Whether the prospective evaluations were rationally formed remains questionable, however. Suzuki (1991) argued that under some macroeconomic environments observed voting behavior will not differ under the competing hypotheses of rational-prospective and adaptive-retrospective behavior.

evaluate aggregate economic outcomes like the growth rate of output. Such outcomes reflect the effects of exogenous random shocks as well as the systematic consequences of government policies. Individuals are likely to make some implicit judgments about the permanence of economic growth, if only to aid in their private decisions about work, leisure, consumption, and saving. Individuals will attempt to distinguish permanent growth (the long-term trend component of their income growth that can be sustained in the future given the past and present income levels) from transitory cyclical growth (the remaining component of their income growth). For example, they might not drastically alter their life-styles because of exceptionally high income growth that is not expected to continue. Individuals have incentives to make such distinctions in an informed manner and may use the information originally acquired for normal private economic activities to make political decisions at times of elections.<sup>3</sup> It may be reasonable for voters to reward incumbent politicians for permanent growth, while not rewarding or punishing them for less desirable cyclical growth, which is often followed by rising inflation. This is true for two reasons. First, when information is imperfect, this behavior provides a reasonable selection mechanism: one must choose among competing politicians who vary in innate competence (Alesina, Londregan, and Rosenthal 1993). Second, it provides an appropriate incentive structure in the context of a principal-agent problem: the principal (the electorate) wishes to motivate desirable policies from the agent (the government) who might shirk in the absence of oversight (Peltzman 1990).

Aggregate presidential and congressional vote studies have consistently indicated that real income growth is associated with favorable election outcomes for the incumbent party (Chappell and Suzuki 1993; Kramer 1971; Fair 1978). The conventional interpretation is that voters are naively retrospective. If this is so, manipulative incumbent politicians might successfully elicit voter support by manipulating aggregate demand and producing (unsustainable) booms. Indeed, Nordhaus's (1975) political business cycle model was structured around voting behavior patterned after the empirical results indicating possible voter naïveté.

Our earlier discussion suggests *an alternative interpretation* of the link between votes and economic growth. We noted that technology shocks induced by microeconomic policies will have long-lasting impacts on productivity and wealth, while manipulating aggregate demand will have only temporary impacts. If some governments produce good microeconomic policies with lasting impacts, they should be rewarded. Similarly, governments whose microeconomic policies are less desirable will produce lasting reductions in national economic well-being and should be punished. Voters necessarily face a difficult problem in discriminating between temporary output fluctuations originating on the demand side of the economy and lasting increases in output originating on the production side. But, if to voters the importance of permanence in output growth looms larger compared with temporary

<sup>3</sup>Even if there exists a handful of rational voters, uninformed voters might obtain voting cues from informed voters and would be able to vote in a sophisticated manner (Lupia 1994).

change, one can resurrect a rational voter interpretation of conventional vote function estimates.<sup>4</sup>

There exist three recent papers on voting outcomes built from the insight that microeconomic policies may induce politically relevant permanent changes in output. First, Peltzman (1990) explained votes for the president across time and states employing a model in which consumption growth rather than output growth was the key economic performance measure. The logic was based on the permanent income hypothesis. That theory posits that consumption is sensitive to changes in permanent income, but much less sensitive to cyclical income changes: if consumers think that income change is transitory, their consumption will not change. Thus, movements in consumption should closely mirror shifts in the underlying (but not directly observable) permanent income component. Peltzman showed that votes for the incumbent president's party are associated with consumption growth. Second, Alesina and Rosenthal (1989), using aggregate data from congressional elections, found some evidence to indicate that voters actually punish cyclical changes in income, both positive and negative ones. Since macroeconomic instability is undesirable, this is compatible with the rational voting hypothesis. However, Alesina and Rosenthal assumed that the permanent component of income change is captured by a steady trend and is thus politically neutral. Moreover, they found little impact of economic conditions on congressional voting when mid-term effects were properly accounted for. Third, Alesina, Londregan, and Rosenthal (1993) advanced a model in which voters focus on policymakers' "competence" shocks. Competence was assumed to follow an MA(1) process, so that the current period's competence is informative about the next period's. Their model is restrictive in its specification of the process for competence shocks, and results based on U.S. voting data from 1916–1988 are inconclusive on the issue of rational versus naive voting.

Our approach offers the advantage of flexible empirical specifications to decompose output growth into permanent and cyclical components. This permits a more direct test than that undertaken by Peltzman (1990) who used consumption spending as a proxy for permanent income. It also offers the prospect of better measurement of permanent and cyclical growth components than Alesina and Rosenthal (1989) or Alesina, Londregan, and Rosenthal (1993). In Alesina and Rosenthal (1989) the permanent component was represented by a simple linear trend; in Alesina, Londregan, and Rosenthal (1993) the persistence of competency, as modeled by the MA(1) process, extended only one period into the future. In the following sections we describe our empirical model and estimation strategy. Then, we

<sup>4</sup>Several empirical studies have suggested that voters might be aware of macroeconomic constraints. Chappell and Keech (1985), for one, developed a model of presidential approval based on an explicit voter understanding of macroeconomic constraints as described by an expectations-augmented Phillips curve. This approach was limited by the adoption of an expectational Phillips Curve as the relevant constraint, with an implicit assumption that policymakers' influences on output and unemployment were purely transitory. In empirically comparing naive and sophisticated models, they could not clearly distinguish the better voting model.

present our findings and sensitivity test results. The final section of the article summarizes the results and discusses implications.

#### EMPIRICAL ANALYSIS

We investigate the rational voting hypothesis by estimating aggregate vote functions. Although it seems peculiar to evaluate hypotheses about individuals' thought processes with highly aggregated data, this is appropriate for several reasons. First, as Kramer (1983) noted, the economic conditions for which governments are responsible are general—fluctuations in the economic status of particular individuals are largely idiosyncratic and unrelated to government policies. To evaluate responses to the general conditions, it is most appropriate to investigate aggregate voter responses to changes in the general conditions over time. Second, if our interest in voter behavior is motivated by a concern for the incentives provided to elected policymakers, it is clearly the response of aggregate vote totals that is most relevant. Finally, for modeling purposes, the rationality assumption need not literally be true of all individuals to be useful. If we find that enough marginal voters behave rationally to explain a significant part of the variance in electoral outcomes, the rational voter hypothesis can be accepted as useful.

The general vote model we estimate consists of the following three-equation system that extends the specification developed in Chappell and Suzuki (1993):<sup>5</sup>

$$\begin{aligned} PV_i &= \alpha_0 + \alpha_1 q_i^P + \alpha_2 q_i^C + \alpha_3 C_i + \alpha_4 DPER_i + \epsilon_{P_i} \\ SV_i &= \beta_0 + \beta_1 q_i^P + \beta_2 q_i^C + \beta_3 C_i + \beta_4 SINC_i + \beta_5 MT_i + \epsilon_{S_i} \\ HV_i &= \gamma_0 + \gamma_1 q_i^P + \gamma_2 q_i^C + \gamma_3 C_i + \gamma_4 HINC_i + \gamma_5 MT_i + \epsilon_{H_i} \end{aligned}$$

where:

- $PV_i$  = The incumbent party's vote percentage of the two-party vote in the presidential election (if such an election takes place).
- $SV_i$  = The percentage of the nationwide two-party vote in Senate elections which favors the party of the incumbent president.
- $HV_i$  = The percentage of the nationwide two-party vote in House elections which favors the party of the incumbent president.
- $q_i^P$  = The permanent component of the change in real gross national product (GNP) in an election year from the previous year.
- $q_i^C$  = The cyclical component of the change in real GNP in an election year from the previous year.
- $C_i$  = The (net) candidate advantage of the incumbency party's presidential candidate. This variable is set equal to zero in mid-term congressional elections.
- $DPER_i$  = A dummy variable equal to one if an incumbent president is running for reelection, otherwise equal to zero.

<sup>5</sup>See Chappell and Suzuki (1993) for the detailed definitions of the noneconomic variables.

$SINC_i$  = The percentage of Senate members whose seats are being contested and who belong to the incumbent president's party.

$HINC_i$  = The percentage of House members whose seats are being contested and who belong to the incumbent president's party.

$MT_i$  = A dummy variable equal to one if elections are midterm; otherwise equal to zero.<sup>6</sup>

$\epsilon_{Pt}$ ,  $\epsilon_{St}$ , and  $\epsilon_{Ht}$  are random error terms drawn from a multivariate normal distribution.

$\alpha_i$ ,  $\beta_i$ , and  $\gamma_i$  are parameters to be estimated.

Our model highlights the permanent and cyclical growth variables to test the rationality hypothesis suggested earlier. The analysis requires the construction of permanent and cyclical components through decomposing the actual time series of interest—real GNP. Different decomposing methods advance distinct assumptions about the underlying economic structure that may result in different distributional properties for the derived permanent and cyclical components. However, there exists no consensus view regarding the appropriate choice of a statistical decomposition. And, given the low power of tests examining the long-run properties of time series, it is difficult to choose the best method for a particular series. Thus, we have decided to adopt an agnostic approach and report the results under three alternative decomposition specifications. These specifications generate permanent and cyclical output components, assuming that the permanent component, or the trend, is (1) approximated by individuals' aggregate consumption (*PL* decomposition) (Peltzman 1990), (2) a log random walk with drift—a constant long-term growth rate (*BN* decomposition) (Beveridge and Nelson 1981), and (3) a smooth stochastic process (*HP* filter) (Hodrick and Prescott 1980).

The *PL* decomposition computes the permanent income component as the fitted values of the regression of real GNP on real personal consumption and computes the cyclical component as the residuals of the regression. The logic of this decomposition relies on the permanent income hypothesis that Peltzman (1990) used in his specification. Peltzman used consumption as a proxy for the permanent income component and did not include the cyclical component in his model. Our specification here is an explicit decomposition of income consistent with Peltzman. The *PL* decomposition may provide a reasonable separation of the real and permanent components of growth, but it does not specify the structure of the growth process explicitly.

On the other hand, the *BN* and *HP* decompositions impose explicit assumptions on the structure of the time series in question to estimate its permanent and cyclical components. The *BN* decomposition assumes that the output process has a unit root that is entirely due to the permanent component of the series. Technology shocks to the permanent component are stochastic: the rate of technological change

<sup>6</sup>Alesina and Rosenthal (1989) noted that omission of this variable can introduce a bias, since early-term partisan economic changes are likely to be empirically confounded with midterm effects.

is highly variable over time. The trend is defined as the value the output process would reach after all cyclical dynamics work themselves out. Thus, the cycle is defined as the sum of future changes in output forecastable at time  $t$  and can be obtained by recursively producing forecasts of future output growth. The trend can be computed as the current actual output value plus all expected future growth.<sup>7</sup>

On the contrary, the *HP* filter represents a generalization of simple detrending methods, assuming that the rate of technological change varies across time, but not too rapidly: the permanent output component evolves gradually at variable speeds over time. The extent to which the permanent component mimics the actual output path depends on a parameter value selected by the researcher. The choice for this parameter value is arbitrary; we use the same value used by Kydland and Prescott (1990).<sup>8</sup> The size and volatility of the permanent components estimated via the two methods should be different because of the different structural assumptions imposed by them. The *HP* filter produces a smaller and less volatile permanent component than the *BN* method does. We will show this point graphically later in the article. We recognize that voters do not go through complex calculations to distinguish permanent and cyclical growth. But, if voters make implicit judgments about the permanence of economic conditions in an informed manner, their implicit judgments can be approximated by a statistical decomposition.

<sup>7</sup>The *BN* decomposition was performed via the procedure suggested by Beveridge and Nelson (1981). They define the trend of a time series as its current observed value plus all forecastable future changes in the series beyond the mean rate of drift. To predict future changes, a well specified *ARMA* model is needed. We used an *AR(2)* model:

$$\Delta Q_t = \phi_1 \Delta Q_{t-1} + \phi_2 \Delta Q_{t-2} + \mu(1 - \phi_1 - \phi_2) + \epsilon_t$$

where  $Q_t$  is the natural logarithm of quarterly real GNP in period  $t$ ,  $\Delta$  is the first-difference operator,  $\epsilon_t$  is a random shock in period  $t$ ,  $\mu$  is a constant, and  $\phi_i$  are the autoregressive parameters. Then, using the *AR(2)* model, we recursively forecasted the future changes up to  $T + 100$ ,  $\Delta \hat{Q}_{t+1}, \Delta \hat{Q}_{t+2}, \dots, \Delta \hat{Q}_{t+100}$ . The forecast horizon was set at 100 for a quarterly series as in Beveridge and Nelson. The estimate of the permanent component was obtained by summing the current level and the forecast changes less the change due to drift,  $100\hat{\mu}$  (the constant is part of the trend and is included in the *AR(2)* model.):

$$\hat{Q}_t^p = Q_t + \left[ \sum_{k=1}^{100} \Delta \hat{Q}_{t+k} - 100\hat{\mu} \right]$$

The terms in the bracket constitute an estimate of the cyclical component. The variance of shocks, or innovations in the permanent component, is determined by data: it is larger or smaller, depending on the autocorrelation structure of a particular series in question.

<sup>8</sup>Our description of the *HP* filter follows that provided by Kydland and Prescott (1990). Let  $Q_t$  for  $t = 1, 2, \dots, T$ , indicate the natural logarithm of real GNP. The trend component for that series, denoted as  $Q_t^p$ , for  $t = 1, 2, \dots, T$ , minimizes

$$\sum_{t=1}^T (Q_t - Q_t^p)^2 + \lambda \sum_{t=2}^T [(Q_t^p - Q_{t-1}^p) - (Q_t^p - Q_{t-2}^p)]^2$$

where  $\lambda$  is a parameter that penalizes the variability of the trend. Kydland and Prescott (1990) suggest that the value of the  $\lambda$  parameter for a quarterly series be set to 1600 that implies which the standard error of the cycle is 40 times larger than the standard error of the trend. We have followed their suggestion. The cyclical component is given:  $\hat{Q}_t^c = Q_t - \hat{Q}_t^p$ .

TABLE 1  
EFFECTS OF PERMANENT AND TRANSITORY GROWTH ON VOTES

Decomposition Method	President		Senate		House		LL <sup>a</sup>
	$q^p$	$q^c$	$q^p$	$q^c$	$q^p$	$q^c$	
Peltzman (PL)	1.74** (.27)	.44 (.86)	.58** (.21)	-.47 (.36)	.52** (.16)	-.42 (.26)	-73.79
Beveridge & Nelson (BN)	1.72** (.28)	-.26 (.87)	.36 (.22)	-.83 (.90)	.24 (.19)	-.33 (.74)	-73.39
Hodrick & Prescott (HP)	1.67* (.46)	2.02** (.34)	.57 (.50)	.20 (.20)	.97** (.35)	.04 (.13)	-75.62
Kramer & Fair (Conventional)	1.89** (.29)	—	.27 (.18)	—	.23* (.14)	—	-74.80

Notes: Standard errors are in parentheses. Each vote model was fully specified as described in the text and was estimated via the maximum likelihood procedure. In this table, coefficient estimates for noneconomic variables and the regression constant are not shown for brevity. The full estimates are available from the authors upon request.

<sup>a</sup>Log-likelihood function value.

\* $p < .05$  one-tail test; \*\* $p < .01$  one-tail test.

We jointly estimated the three vote equations based on the alternative decomposition methods over the 1948–1992 period by employing seemingly unrelated regressions (SUR) technique.<sup>9</sup> The SUR estimates summarized in table 1 provide mixed support for the rationality hypothesis. First, results based on the *PL* decomposition suggest that marginal voters treat permanent and cyclical growth differently and sensibly at the three levels of national elections. The rationality hypothesis postulates  $\alpha_2, \beta_2, \gamma_2 > 0$  and  $\alpha_3, \beta_3, \gamma_3 \leq 0$ . The results in the first row of table 1 confirm  $\alpha_2, \beta_2, \gamma_2 > 0$  and  $\alpha_3, \beta_3, \gamma_3 = 0$  under normal statistical standards. Results based on the *BN* decomposition in the second row also show the substantial positive impacts of permanent growth and no significant effects of cyclical growth in the three equations. The vote estimates from the two decompositions are similar because the permanent growth rates estimated via the two methods share similar statistical properties: they are correlated with one another on the order of .73 during the 1948–1992 annual period. This implies that the *BN* decomposition approximates the *PL* specification with respect to marginal voters' implicit judgments about the permanence of economic growth. From the statistical structure of the *BN* decomposition, one can argue that individuals might perceive a large permanent component in growth; such perception is well reflected on their consumption behavior, as posited by the permanent income hypothesis.

<sup>9</sup>For estimation, we used a generalized least squares (GLS) estimator. GLS estimates are asymptotically equivalent to conditional maximum-likelihood estimates, having the same asymptotic distributions as full information maximum-likelihood estimates. See Chappell and Suzuki (1993) for the GLS estimation procedure and for documentation of efficiency improvements created by a SUR technique.

We conducted a sensitivity test regarding the assumption of equal coefficients for permanent and cyclical growth components. The test rejected the equal coefficients assumption, which is equivalent to rejecting the conventional model in favor of a rational model.<sup>10</sup> Yet the results for the Kramer-Fair conventional model shown in table 1 are similar to those for the rational models based on the *BN* and *PL* decompositions. One reason is that the specifications classify a large portion of real fluctuations as permanent. If most growth is permanent, the rational and non-rational vote models would be expected to produce very similar results: the non-rational model closely approximates a rational model. Although the conventional vote model seems to provide an adequate fit to the data, we reject it in favor of a rational model based on the results of the test of the equal coefficients.

Results based on the *HP* filter are less satisfactory for the rationality hypothesis: cyclical growth has a larger impact on the presidential vote than permanent growth does. Figure 1 indicates that the *HP* filter classifies a considerably larger component of growth as cyclical than other specifications do. The trends estimated via the *PL* and *BN* specifications closely follow the actual real GNP values—large permanent components and small cyclical components relative to the actual values. In contrast, the trend estimated via the *HP* filter has a smooth evolution with a relatively small trend and large cycle.<sup>11</sup> Thus, growth classified as cyclical by *HP* can be persistent over the medium term, and thus politically relevant. This result explains the significant effect of cyclical growth in the presidential vote equation. Given the persistence of cyclical deviations as measured by the *HP* filter, it may indeed be rational for voters to reward and punish them. We should also note that the large cyclical component of output produced by the *HP* filter is a direct result of our arbitrary setting of  $\lambda$  to 1600. When smaller values for  $\lambda$  are used instead, the *HP*-based vote estimates mirror those of the *PL* decomposition more closely.<sup>12</sup> Thus, the hypothesis of rational voting is robustly supported so long as the decomposition procedure produces a large permanent component for output growth. Further, this result indicates the essence of the contextual nature of rational behavior. Whether a particular behavior is judged as being rational depends on the context in which the behavior takes place.

<sup>10</sup>For each vote equation, we formally tested the hypothesis that coefficients for the permanent and cyclical growth are equal. The tests used the *PL*-based vote model. The equal coefficients hypothesis was rejected in the entire vote model and independently in the presidential, Senate, and House equations. The Wald test statistics are  $\chi^2(3) = 12.77$  ( $p < .01$ ),  $\chi^2(1) = 2.83$  ( $p < .10$ ),  $\chi^2(1) = 5.63$  ( $p < .05$ ), and  $\chi^2(1) = 7.84$  ( $p < .01$ ), respectively. In other words, votes are more sensitive to permanent than to cyclical growth. The detailed test results are available from the authors on request.

<sup>11</sup>The real GNP growth rate is correlated with the *PL*, *BN*, and *HP* permanent growth rates on the order of .72, .95, and .54, respectively, during the 1948–1992 annual period.

<sup>12</sup>We reduced the  $\lambda$  parameter value by taking a square root of the original value of 1600 repeatedly. The *HP* permanent growth rates estimated with  $\lambda = 1600$ ,  $\lambda = 1600^{1/2}$ ,  $\lambda = 1600^{1/4}$ , and  $\lambda = 1600^{1/8}$ , are correlated with the *PL* permanent growth rate on the order of .41, .62, .69, and .72, respectively, during the 1948–1992 period: the smaller the  $\lambda$  value, the greater permanent growth component is estimated by the *HP* filter.

FIGURE 1  
REAL GNP AND PERMANENT OUTPUT COMPONENTS  
ESTIMATED BY THREE DECOMPOSITIONS: 1948-1992

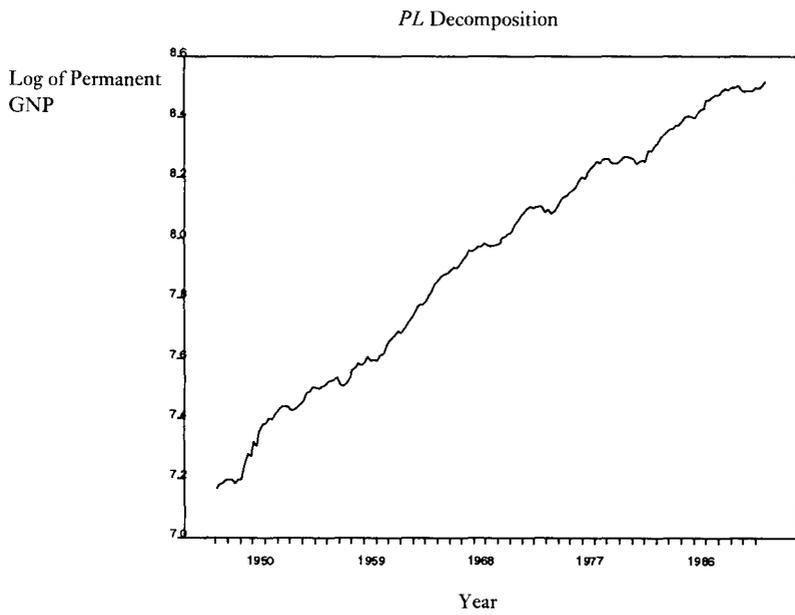
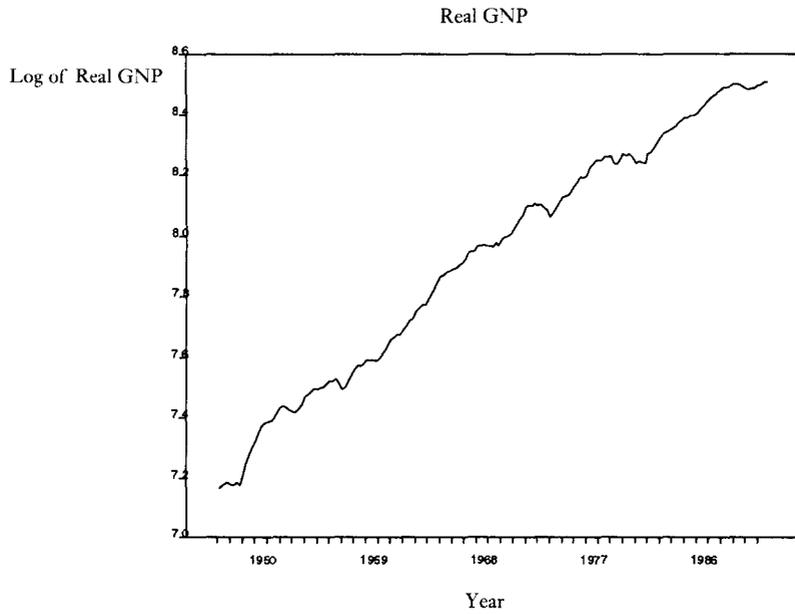
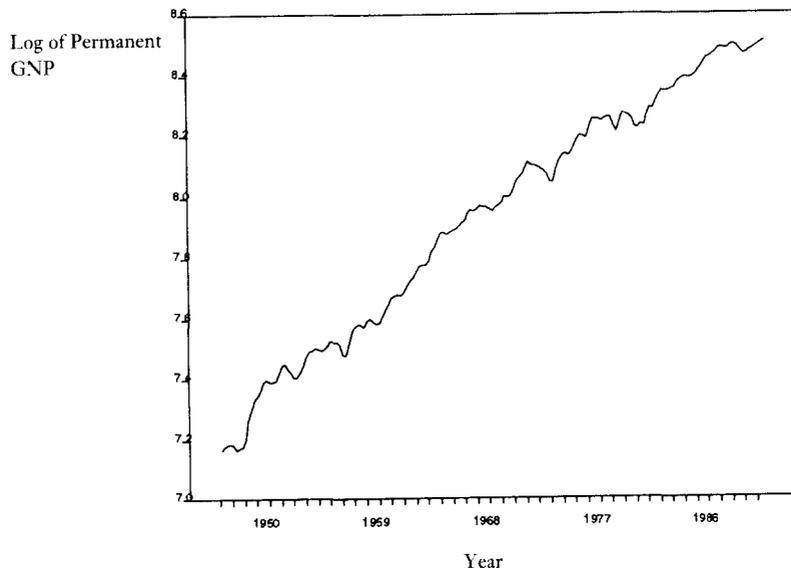
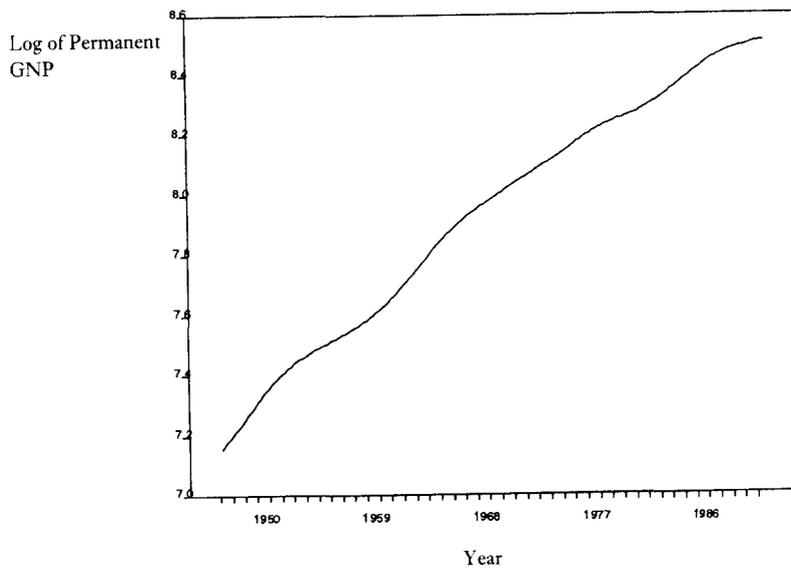


FIGURE 1 (continued)

*BN* Decomposition



HP Filter



## CONCLUSION

We reexamined voter rationality using post-World War II, U.S. national election data. Our evidence cannot reject the view that voters are rational, a result that echoes conclusions of Chappell and Keech (1985), Peltzman (1990), and Alesina and Rosenthal (1989). We showed that voting behavior in presidential and congressional elections could reflect marginal voters' awareness of economic constraints and the implications of vote choices for their long-term economic well-being. Particularly, the voters are more sensitive to permanent than cyclical economic growth when these two components are distinguished by a decomposition that finds a large, stochastic trend in the output process. The voters appear to make such distinction for their private economic activities (consumption) and use the knowledge for vote decisions.

The finding that voters are retrospective does not imply that they are naive. Voters who distinguish permanent from cyclical growth need not fall prey to political business cycles generated by manipulative politicians. Rather, marginal voters' concern with permanent growth would encourage governments to adopt policies that promote long-term rather than short-term income gains. It would be pointless for an incumbent party to create a preelection economic boom: cyclical growth would not yield significant electoral rewards from rational voters. Voting behavior described by Kramer (1971) and Fair (1978) has long been regarded as naive and manipulable. But this conclusion may have followed from a misinterpretation (perhaps a misspecification) of the model of voting behavior. If enough marginal voters reward permanent growth, and if a large portion of growth is permanent, then one can see how the Kramer-Fair results emerge, *even if the correctly specified model should distinguish temporary and permanent growth.*

*Manuscript submitted 13 June 1994*

*Final manuscript received 18 April 1995*

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