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SHORT AND LONG-TERM EFFECTS OF ECONOMIC CONDITIONS |ON
INDIVIDUAL VOTING DECISIONS*

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I. INTRODUCTION

A review of the Political Business Cycle (PBC) literature
provides grounds for cautious optimism: the literature is cumulative
and it exhibits steady theoretical advancement. Early contributions
focused primarily on the demand side of the system, i.e. do voters
react to economic fluctuations in simple, direct, self-interested
fashion (e.g. Kramer, 1971)? More recently, the supply side of the
system has attracted attention: do governments stimulate their
economies in the period prior to elections then dampen those economies
after the electoral challenge is past (e.g. Nordhaus, 1975)? And in
current research scholars have begun to integrate the two sides of
the system as part of what ultimately may become a reasonable general
equilibrium model of the PBC (e.g. Fair, 1975; Frey and Schneider,
1978a).

Past achievements and salutory prospects aside, numerous
questions remain and various disagreements persist. For one thing,
many of us doubt that democratic governments, especially the more
decentralized ones, have either the political capability or the
economic knowledge to bring about a neat, periodic cycle in the
macro-economy. Others deny that voters react in the simplistic ways

that the current PBC models presume. Yet even granting the validity
of such criticisms, it appears certain that some type of ill-defined,
imprecise elections-economy interaction exists (perhaps just foregoing
the term "cycle" would avoid much controversy). Even if governments
can not reliably manipulate the macro-economy, they can and do mani-
pulate transfer payments, public works programs, and various other
specific activities (Tufte, 1978). And even if voters are not as
myopic as present models presume, who doubts that some part of the
electoral outcome reflects voter reaction to economic conditions in
the country? The question becomes trivial when one considers extreme
cases like the Great Depression, from which the American Republican
party has yet to recover. The existence of some elections-economy
nexus can be taken for granted. The important task of the next
generation of PBC studies is to elaborate and refine the component
models which individually draw scholarly fire.

As a first step in doing so, I propose to examine one
important part of the PBC. Demand side analyses typically adopt
extremely simplified models of voting behavior. Moreover, the
estimation of such models generally employs highly aggregated data
compiled in time series. For some time I have been studying the
basis (economic and otherwise) of individual voting using survey
data from the American National Election studies of 1956-1976. This
paper reports some selected findings from that larger project.[1] I
emphasize that I am not proposing individual level, cross-sectional
analysis as an alternative to the aggregate, time series analyses
already carried out. Rather, I am simply attempting to look more

closely than previous studies at the micro-level basis of the PBC
dynamic. Given the nature of the enterprise I suspect that the PBC
literature will continue to rely on time series of aggregate data,
but perhaps second generation demand side models will profit from
the endeavors of those of us who shuffle along on the micro-level.

II. ELECTORAL COMPONENTS OF EXISTING PBC MODELS

Past research has focused on the estimation of two basic
models of the electorate's reaction to the hypothesized expansion-
contraction dynamic. One of these models is direct, the second a
bit less so. Kramer's (1971) seminal work exemplifies those models
which presume a direct impact of economic conditions on voting.
The division of the popular vote for Congress is taken as the
dependent variable and various economic indicators as the independent
variables.[2] Other studies in this vein include Stigler (1973) and
Arcelus and Meltzer (1975). Niskanen (1975) has estimated an
analogous model for American Presidential elections. Although the
details differ from study to study, the overall picture that emerges
is one of an electorate which acts as a "rational god of the vengeance
and reward," (Key, 1964, p. 568) with the emphasis on vengeance
according to some studies (Bloom and Price, 1975).

The indirect approach concentrates on the estimation of
"popularity functions." Analysts of survey data (not to mention
politicians) have long recognized that executive popularity bears
a strong relationship to the vote. If popularity itself varies
with economic performance, a two step effect of the latter on

voting exists. Such a covariance has been demonstrated repeatedly.
For the United States see Kernell (1978), Frey and Schneider (1978a);
for Great Britain, Frey and Schneider (1978b); for the German Federal
Republic, Frey and Schneider (1978c); and for France, Lafay (1978).

Thus, aggregate level analyses provide a considerable amount
of evidence that economic conditions affect the electoral fates of
the governments associated (justifiably or not) with them. For the
most part however, aggregate analysts do not give a great deal of
thought to the individual behavior which underlies the aggregates they
study. Indeed, many of the disagreements which exist among those
who estimate vote and/or popularity functions probably arise from
differing but unspoken ideas about how voters behave. Most studies
implicitly presume a simple retrospective model; the voter is rather
myopic, concerned with outcomes rather than policies, and finds it
especially easy to monitor ups and downs in his economic situation
presumably associated with fluctuations in the economy. But a few
scholars (e.g. Stigler) are agnostic about economic influences on
voting precisely because they hold a considerably more complex view
of the voter: not so myopic as to forget everything prior to the
election year, concerned with the economic policy differences
(perhaps nonexistent) between the parties, and aware that governments
may have little or nothing to do with fluctuations in the economy.
If one holds such a view, the estimation of aggregate vote/popularity
functions appears rather simple-minded, and the traces of aggregate
affects can be dismissed as spurious.

It is easy enough to perform the micro-level analogues of

the aggregate vote and/or popularity functions. The next section of this paper contains such an exercise. Unfortunately, a bit of thought reveals that the effort is even more subject to charges of simple-mindedness than analyses utilizing aggregate time series data. Thus, we offer a more elaborate model of the individual voting decision in section IV of the paper. Succeeding sections report estimations of statistical models based on the theoretical development of section IV.

III. INDIVIDUAL LEVEL VOTE AND POPULARITY FUNCTIONS, A FIRST CUT

The American National Election (hereafter CPS) Studies contain a variety of items which elicit the individual's personal financial situation and employment status, as well as more general perceptions of the performance of the government in handling the economy and of business conditions in the country. Occasionally, items dealing with trends in taxation and inflation appear as well. For reasons which will be evident later I use the 1972-76 CPS Panel Study for the estimations in this paper, with all vote and popularity functions based on the 1974-1976 wave. The survey items which produce the dummy variables used in the analyses which follow are:

Financial Situation. "Would you say that you (and your family living here) are better off or worse off finan-cially than you were a year ago?"

Business Conditions. "Would you say that at the present time business conditions are better or worse than they were a year ago?"

Head Unemployed. Dummy variable based on whether head of family is now unemployed or was out of work during the preceding twelve months.

Recession. Dummy variable based on whether respondent or his family was materially affected by the 1974-75 recession (i.e. loss of employment, lower wages, fewer hours, poorer conditions).

Government Inflation Performance. "Thinking about the steps that have been taken to fight inflation—would you say that the government has been doing a good job, only fair, or a poor job?"

Government Unemployment Performance. "Now how about the government's economic policy dealing with unemployment - would you say the government has been doing a good job, only fair, or a poor job?"

Presidential Performance. "Do you approve or disapprove of the way Mr. Ford is handling his job as President?"

Nixon Pardon. "Shortly after taking office, President Ford pardoned Richard Nixon for any wrong-doings he may have committed while he was President. Do you think Ford should have pardoned Nixon?"

Civil Rights. "Do you think that Civil Rights leaders are trying to push too fast, are going too slowly, or are they moving at about the right speed?"

While the Nixon pardon and civil rights variables are not of direct interest to the participants in this conference, they are

included in the analysis in an attempt to get as complete a specifi-cation as possible.[3] Many of the aggregate analyses are underspecified in that they include only economic variables, and attempt to account for all other influences by introducing a few dummy variables for wars, and/or for different administrations or governments.

The simple vote functions for the 1976 presidential and congressional voting, and the 1976 Ford popularity function appear in Table 1.[4] As seen, the results are consistent with those of the aggregate analyses previously reported. In the vote functions, approval of Ford's performance and his pardon of Nixon have a large and highly significant impact on the probability of voting Republican. Financial situation has some importance in the congressional equation but virtually none in the presidential equation. At the societal level the business conditions item is significant in both vote functions, while the inflation and unemployment performance items appear important only in the presidential equation. Turning to the popularity function we see that the results are parallel to but generally stronger than those for the vote functions. The summary statistics may not impress those used to working with aggregate time series data, but for survey data the fits are quite satisfactory.

[Table 1 here]

The problem with the foregoing analysis is apparent to any survey analyst: the items utilized are subjective perceptions, not objective indicators. When an aggregate analysis finds executive popularity declining as unemployment rises, little causal ambiguity exists. But what if presidential popularity is lowest among those

TABLE 1

PROBIT ESTIMATES FOR SIMPLE VOTE AND POPULARITY FUNCTIONS

	1976 Presidential Vote	1976 Congressional Vote	1976 Ford Popularity
Ford Performance	1.39**	.93**	
Nixon Pardon	.85**	.44**	.94**
Financial Situation – Same	– .03	.17†	.00
– Better	– .06	.22*	.11
Government Inflation Performance			
– Fair	.07	– .18	.48**
– Good	.42**	.19	1.43**
Government Unemployment Performance			
– Fair	.21*	– .02	.17
– Good	.21†	.13	.44**
Head Unemployed	– .21*	– .14	
Business Conditions – Better	.35**	.20*	.41**
– Same	– .08	– .05	.09
Recession	---	---	– .17**
Civil Rights – Too Fast	.19*	.06	– .05
– Too Slow	– .43*	– .38*	.56**
Constant	–1.78**	–1.14**	1.03
Correctly Predicted – Probit	80.1 %	70.2 %	77.0 %
– Null	57.7	57.0	61.9
$\hat{R}^2$	.57	.33	.60
n	1,379	1,140	2,158

† p < .10
* p < .05
** p < .01

who believe government performance on unemployment is poorest? Is

the causal link obvious? Or is it the case that offended Poles,

vindictive Reaganites, and born-again Christians rate Ford and his

unemployment performance (and other things as well) poorly on

entirely unrelated grounds. Potentially even more confounding is

party identification (PID). Political scientists at this conference

no doubt are familiar with this concept (though my European colleagues

have shown the good sense not to swallow uncritically the American

concept) but other participants may appreciate a brief exegesis.

Party Identification is held to be an enduring, affective affiliation

with a party, an affiliation with many of the same characteristics

as a religious identification. Not only is PID the single most

important influence on voting in American elections, but it appears

to act as a "perceptual screen" through which individuals evaluate

politically relevant events and conditions, an administration's

economic performance for example (Campbell, et al., 1960). The

believer in the preceding concept of PID would dismiss most of Table

1. The financial situation, business conditions, and unemployment

items probably are okay--these items contain no political referent.

But the Ford Performance, Nixon Pardon, and Government Performance

items would arouse great suspicion. Possibly they reflect no more

than an individual's preexisting positive or negative feelings toward

the party which happens to hold the presidency.

The traditional conception of PID is currently undergoing

revision, but that does not obviate all problems. Clearly it is

dangerous to take Table 1 at face value--voter subjectivity probably

does color the answer to several of the items, and Table 1 takes no

account of that fact. The standard reaction at this point is to

include an explicit "control" for PID into the analysis and proceed.

I have done that in the past (1978), but that too now seems simple-

minded. Instead, let us leave the data temporarily and consider

the voting decision of an average citizen, one responsive to the

events and conditions he experiences, but neither super-rational nor

perfectly informed, one who holds various standing attachments, but

ones neither devoid of content nor impervious to change.

IV. AN OUTLINE FOR A MODEL OF PARTY CHOICE[*]

Simple Issue Voting

Imagine a society created _ex nihilo_ with a two party

democratic system imposed on it by the creating force. How would new

citizens make their voting decisions? Let us indicate by X^i the vector

of policy positions held by individual i, by SQ_p the vector of policies

constituting the present social state (i.e. the _status quo_), by θ_{p+1}

ψ_{p+1} the vectors of policies which lead to alternative future social

states (i.e. the campaign pledges of parties θ and ψ), and by U^i the

utility function of the ith citizen. At this time nothing need be

assumed about the latter except that it is monotonically decreasing with

the "distance" (however defined), of a social state from the citizen's

[*] This section is based on an article of the same name (1977) and a
more extensive development in the book in progress. In the interest
of space I have eliminated all but the barebones of the argument
including most of the motivation for the model, the justification
for various features, and some supporting data. As result it will
no doubt strike some readers as even more arbitrary than it is.
My principal object here is to motivate the statistical models in
succeeding sections, so I beg the reader's forbearance.

preferred position, and at its maximum when the two coincide.[5]
Because I will be referring to an arbitrary citizen in what follows
I will drop the superscript i.

In the absence of any history whatsoever it seems natural
that a voter in the new society would evaluate the contending parties
in terms of their promised changes in his personal welfare between
the present, p, and the next election at (p+1). In the notation
introduced above we can represent these evaluations as:

$$E(\theta) = U(X_{p+1}, \theta_{p+1}) - U(X_p, SQ_p)$$

$$E(\psi) = U(X_{p+1}, \psi_{p+1}) - U(X_p, SQ_p) \tag{1}$$

and he votes for θ rather than ψ only if

$$E(\theta) \geq E(\psi)$$

which implies

$$U(X_{p+1}, \theta_{p+1}) - U(X_{p+1}, \psi_{p+1}) \geq 0. \tag{2}$$

The decision rule (2) represents <u>simple</u> <u>issue</u> <u>voting</u>, a vote based
solely on an evaluation of the relative attractiveness of the two
parties' platforms. (2) of course, is the postulate of partisan
choice which underlies simple spatial models of party competition.

Simple Retrospective Voting

In the hypothetical society under consideration assume
that party θ wins the first election and governs the society for
one interelection period. At the time of the next election how

does a citizen choose between θ and ψ? Certainly, he could again
use (2), but should he ignore the "hardest" bit of information he
has--θ's performance during his term in office? Surely not. But
just <u>how</u> can the citizen take θ's performance into account?

Downs (1957) suggests one way; namely, that the citizen
uses θ's past performance to estimate θ's likely future position.
Recall the Downsian argument that past actions provide a more reliable
estimate of future actions than do campaign pledges. Certainly this
argument has merit, but Downsian theory is not the whole story. In
the real political world the citizen might learn that θ is so incom-
petent that stated positions bear little or no relation to policy
outcomes. Or reliability and responsibility aside, it could be the
case that θ runs an extremely unpredictable administration, but that
his policies typically work out well for the citizen. Sometimes
citizens might even believe that future issues are disjoint from
successfully confronted past issues. In such circumstances θ's past
performance would be irrelevant according to Downs. But in each of
the preceding cases θ's performance still conveys some information
about his general ability or competence to govern.

For these reasons the model adopts the more traditional
concept of retrospective voting. The incumbent's past performance
will not be treated merely as a means for estimating the terms in
(2), although nothing precludes that possibility. Rather, the
incumbent's performance will be treated as a "bias" in the citizen's
voting decision, with the degree of bias directly related to the
citizen's evaluation of the incumbent's performance. Rather than
(2), consider (3).[6]

$$\alpha_{p-1}[(X_p, \theta_p) - U(X_{p-1}, SQ_{p-1})]$$

$$+ \alpha_p[U(X_{p+1}, \theta_{p+1}) - U(X_{p+1}, \psi_{p+1})] \geq 0 \qquad (3)$$

where

$$\alpha_{p-1} \geq 0$$

$$\alpha_p \geq 0$$

$$\theta_p = SQ_p.$$

The decision rule given by (3) is an attempt to formalize the concept of retrospective voting. The bracketed term weighted by α_{p-1} constitutes a bias, an a priori merit or demerit in the mind of an elector. If the citizen has prospered under the incumbent, he enters the voting booth predisposed toward the incumbent, ceteris paribus. If the citizen has suffered, the challenger might capture his vote even with an inferior campaign platform.

While plausible on its face, perhaps (3) is needlessly restrictive. Consider the candidate evaluations which generate (3):

$$E(\theta) = \alpha_{p-1}[U(X_p, \theta_p) - U(X_{p-1}, SQ_{p-1})$$

$$+ \alpha_p[U(X_{p+1}, \theta_{p+1}) - U(X_p, \theta_p)]$$

$$E(\psi) = \alpha_p[U(X_{p+1}, \psi_{p+1}) - U(X_p, \theta)]. \qquad (4)$$

Clearly, from (4) we see that the hallmark of (3) is its asymmetry. There is no "what might have been" term for the challenger. Rather, (3) assigns the initiative to the incumbent to make or break his

own fortunes. If the incumbent has performed well, he enters the campaign with a stock of credit. If he has performed poorly, he enters the campaign with a handicap. This asymmetry is not too bothersome--real elections _are_ asymmetric. Focusing on the point at hand, I expect that many Americans considered Ford's handling of the economy when they made their voting decision in 1976, but I doubt that many took the additional step of calculating what McGovern might have done.

Still, perhaps some did. Perhaps a citizen's lot has improved under the incumbent, but he believes that any given "man from Missouri" could have done even better. By totally ignoring "opportunity costs," do we go too far? Why not look upon (3) as a special case in which the citizen completely ignores the potential performance of the challenger? The general case would include a term representing the challenger's hypothetical past performance:

$$r_{p-1}\alpha_{p-1}[U(X_p, \psi_p) - U(X_{p-1}, SQ_{p-1})]$$

where

$$0 \leq r_{p-1} \leq 1.$$

We can think of r as a reliability, uncertainty, or competency discount. If the citizen believed not a word of what the challenger said, or paid no attention, r = 0, thus producing (3). Because the incumbent actually governed, his performance is _not_ similarly discounted; the voter _experiences_ the effects on his welfare which have occurred.

Thus, a more general retrospective voting model has candidate evaluations of

$$E(\theta) = \alpha_{p-1}(U_p^\theta - U_{p-1}) + \alpha_p(U_{p+1}^\theta - U_p^\theta)$$

$$E(\psi) = r_{p-1}\alpha_{p-1}(U_p^\psi - U_{p-1}) + \alpha_p(U_{p+1}^\psi - U_p^\theta)$$

(4')

where notation is simplified as follows:

$$(U_p^\theta - U_{p-1}) = [U(X_p, \theta_p) - U(X_{p-1}, SQ_{p-1})]$$

$$(U_p^\psi - U_{p-1}) = [U(X_p, \psi_p) - U(X_{p-1}, SQ_{p-1})]$$

$$(U_{p+1}^\theta - U_p^\theta) = [U(X_{p+1}, \theta_{p+1}) - U(X_p, \theta_p)]$$

$$(U_{p+1}^\psi - U_p^\theta) = [U(X_{p+1}, \psi_{p+1}) - U(X_p, \theta p)]$$

and

θ_p is the actual SQ_p, while

ψ_p is an hypothetical SQ_p, when

θ is incumbent, ψ challenger

The candidate evaluations (4') in turn yield a more general retrospective voting model:

Vote for θ only if:

$$\alpha_{p-1}(U_p^\theta - U_{p-1}) + \alpha_p(U_{p+1}^\theta - U_{p+1}^\psi) - r_{p-1}\alpha_{p-1}(U_p^\psi - U_{p-1}) \geq 0$$

(3')

Although complex in appearance, (3') is quite simple. It asserts that in making his voting decision the citizen looks at the

incumbent's performance, the alternative platforms of the incumbent and challenger and (perhaps) imagines a hypothetical past performance term for the previous challenger.

It is worth pointing out that even (3') provides latitude for a great deal of individual level variation in voting behavior. If we presume $\alpha_{p-1} \ll \alpha_p$, we have the classic policy voter of democratic theory. If we presume $\alpha_{p-1} \gg \alpha_p$, we have the "nature of the times" voter of The American Voter (19 0). The introduction of the past performance term and the variable weights, α_{p-1}, α_p, r_{p-1} allow for dissimilar appearing voting decisions within the confines of a single model.

One final modification. We have discounted the challenger's hypothetical past performance by a factor, r_{p-1}, in recognition of the uncertainty and ignorance surrounding such a calculation. The same considerations suggest a similar discounting of the promised future performances of both candidates. If we discount θ's promises by s_p and ψ's by r_p, then we can write formally symmetric candidate evaluations as

$$E(\theta) = s_{p-1}\alpha_{p-1}(U_p^\theta - U_{p-1}) + s_p\alpha_p(U_{p+1}^\theta - U_p^\theta)$$

$$E(\psi) = r_{p-1}\alpha_{p-1}(U_p^\psi - U_{p-1}) + r_p\alpha_p(U_{p+1}^\psi - U_p^\theta)$$

(4")

where

$$s_{p-1} = 1, \quad 0 \leq s_j, r_j \leq 1.$$

Having proceeded thus far, the next step is reasonably obvious.

Party Identification

Assume that our hypothetical society has been in existence for several generations. How do the descendants of the original issue and retrospective voters make their voting decisions? I suggest that to some extent or another the descendant takes into account all past experiences with the parties, for the election occurring at the time of his first political consciousness to the present, p, and the future, $p+1$. Thus, (4") is generalized to

$$E(\theta) = \sum_{j=1}^{p} s_j \alpha_j (U_{j+1}^{\theta} - U_j)$$

$$E(\psi) = \sum_{j=1}^{p} r_j \alpha_j (U_{j+1}^{\psi} - U_j)$$

(5)

where

$$0 \leq r_j, s_j \leq 1$$

$s_j = 1$ if θ is incumbent during period j

$r_j = 1$ if ψ is incumbent during period j

and a citizen votes for θ rather than ψ only if $E(\theta) \geq E(\psi)$. This formulation yields the issue voting and retrospective voting formulations as special cases. But it also allows the sixty-five year old union member to vote for McGovern partly on the basis of his approval of FDR. This last observation sounds curiously reminiscent of statements about party identification. How close is the connection?

We can decompose the general candidate evaluations into two classes of terms: past political evaluations (PPE), and current issue evaluations (CIE), i.e.

$$E(\theta) = PPE(\theta) + CIE(\theta)$$

$$E(\psi) = PPE(\psi) + CIE(\psi)$$

where

$$PPE(\theta) = \sum_{j=1}^{p-1} s_j \alpha_j (U_{j+1}^{\theta} - U_j)$$

$$CIE(\theta) = s_p \alpha_p (U_{p+1}^{\theta} - U_p)$$

(5')

$$PPE(\psi) = \sum_{j=1}^{p-1} r_j \alpha_j (U_{j+1}^{\psi} - U_j)$$

$$CIE(\psi) = r_p \alpha_p (U_{p+1}^{\psi} - U_p)$$

The PPE terms summarize the citizen's past experiences with the two parties, while the CIE terms represent his appraisal of the alternative futures the parties promise him. Now, in light of the preceding discussion it seems natural to propose the following definition of party identification:

$$PID(\theta) = (PPE(\theta) - PPE(\psi) + \gamma)$$

$$PID(\psi) = - PID(\theta)$$

(6)

$$PID = \text{independent, if } PID(\theta) = PID(\psi) = 0$$

where γ is an initial bias $(+, 0, -)$ which the individual brings to the political arena. (Presumably γ is a direct function of

socialization, but indirectly a function of the past political experiences of the socializing agents). In (6) we have a concept of PID which captures the presumed long-term essence of the notion while providing a mechanism for change in response to current political experience. This notion of party ID has its roots in reality, albeit mostly in past reality. Nevertheless, in the various discounting variables (s_j, r_j, α_j) there is considerable room for psychology to operate on reality. If not completely "rational," the model at least attempts to be highly reasonable.

With the definition of party ID advanced above, we can write the candidate evaluations in quite simple form. A citizen votes for θ rather than ψ only if $E(\theta) - E(\psi) \geq 0$ which is equivalent to

$$PID(\theta) + CIE(\theta) - CIE(\psi) \geq \gamma. \qquad (7)$$

Thus, according to this model, party ID combines additively with current issue concerns. But to reiterate, party ID at any given time is a function of political evaluations up to that time.

The Statistical Models

The next three sections of this paper present statistical analyses based on the model just outlined. This section describes the general form those models take. One of the models reflects (6), another (7), and a third reflects the way CPS gives us the data. All of this should become clear momentarily.

In an ongoing democratic system party choice occurs at the conclusion of the pth period of an individual's political awareness.

According to (5) that choice is based on expectations for the $(p+1)^{th}$ period, evaluations of life during the pth period, and carry-over judgments from periods 1 to $(p-1)$. Let $\{RE\}j$ signify an individual's set of retrospective evaluations formed during period j. Some $\{RE\}$ will focus on Democratic administrations, some on Republican, some will be positive, some negative. But assuming such evaluations are comparable for the individual, (6) suggests the following statistical model of present PID:

$$PID_p = \gamma + \sum_{i=1}^{p} B_i RE_i + u_p \qquad (8)$$

where RE_i is a vector of Retrospective Evaluations for period i, and B_i is the associated vector of coefficients. Owing to the additive structure of the model (8) can be decomposed to

$$PID_p = PID_{p-1} + B_p RE_p + (u_p - u_{p-1}) \qquad (9)$$

which is estimable with panel data.

Given the known stability of party ID (9) should permit a good fit to the observed data. The critical question is whether observed temporal changes in party ID are purely random movements reflecting measurement error and idiosyncratic variation, or whether such changes are systematically associated with the individual's retrospective judgments of contemporary politics.

The $\{RE\}_j$ themselves are theoretically exogenous, but because of certain characteristics of the available data it is prudent to treat some of them as endogenous. Specifically, the surveys give us two kinds of retrospective evaluations, <u>direct</u>

retrospective evaluations (DRE), and _mediated_ retrospective

evaluations (MRE). The DRE include such items as personal financial

situation, civil rights, etc. which appear to reflect citizens'

direct experiences or impressions of political events or conditions.

In contrast, the MRE include such items as presidential performance

and administration economic performance--summary judgments which

probably reflect a citizen's choice of information sources and

opinion leaders, which in turn reflect prior predispositions.[8]

This division of RE into two pure types is somewhat oversimplified.

No doubt the survey items fall along a rough continuum with the

personal financial situation item anchoring the DRE end

and the presidential performance item the MRE end. Most of us

could agree that the business conditions item falls closer to the

DRE end while the government inflation performance item falls

closer to the MRE end, but ultimately, the distinction between items

treated as basic (exogenous) and those taken as objects of explanation

remains somewhat arbitrary. At any rate we will estimate several

special cases of the following model:

$$MRE_{p,i} = PID_{p-1} + B_p DRE_p + C_p MRE_{p,j \neq i} + D_p Z_p + u_p \qquad (10)$$

where Z_p is a vector of additional exogeneous variables, and D_p the

associated vector of coefficients.

In words, each specific MRE should depend on relevant DRE (e.g.

government economic performance on personal financial situation),

less "general" MRE (e.g. presidential performance on economic

performance), and the store of earlier retrospective evaluations

(PID_{t-1}) possessed by the citizen. I emphasize that inclusion of

PID_{p-1} in (9) is not soley a "control" for "partisan bias" as

traditionally conceptualized. The intent is broader. PID_{p-1}

should proxy two factors. First, all individuals do not receive

random samples of political information. The steelworker may

judge the performance of a Democratic president on the basis of

the union newsletter, whereas the manager of his plant may rely

on the Wall Street _Journal_. No doubt one's party ID is associated

with this kind of systematic difference in receipt of information.

Second, ambiguous information is likely to receive a partisan

benefit of doubt in its interpretation.

Finally, we come back to vote choice. (7) suggests the

following model:

$$Vote_p = PID_{p-1} + B_p RE_p + C_p CIE_p + (u_p - u_{p-1}). \qquad (11)$$

Like DRE, CIE are taken as exogenous. Naturally, if politics has any

continuity, CIE will be associated with PID. But in the model there

is no causal link running from the latter to the former. If CIE

should consistently fail to display any importance in versions of (11)

it might indicate the Downsian theory at work: CIE merely reflect

past performance. Things appear more complex though.

V. THE RESPONSE OF PID TO ECONOMIC CONDITIONS AND PERFORMANCE

Table 2 contains estimates for the PID equation. As a

glance back at (9) shows there is one econometric complexity: PID_{p-1}

will surely be correlated with the error term $(u_p - u_{p-1})$. Without

remedial action we risk biased and inconsistent results. The

standard remedy when using ordinary regression analysis is a two-stage procedure which first estimates a "purged" variable, PID_{p-1}^* which then substitutes for the offending variable, PID_{p-1}. In the case of probit analysis the two-stage estimates do not have all the desirable properties of the two-stage least squares estimates, but they do have the important property of consistency (Nelson and Olson, 1977). In order to perform the two-stage analysis I first estimated PID_{1974}^* as a function of numerous demographic and socioeconomic characteristics known to be related to PID as well as various 1974 retrospective evaluations.[9] This estimate substituted for the six dummy variables (formed from the seven point PID measure) which would normally be used. Table 2 contains both the first and second stage analyses for comparative purposes.

[Table 2 here]

The results are ambiguous. Previous PID is the strongest influence on present PID, which is not surprising. Among the variables of interest, presidential performance and favorable perceptions of government inflation and unemployment performance make a significant contribution to current PID. The ambiguity arises from the fact that all of these are what I have termed mediated retrospective evaluations. The direct retrospective evaluations (financial situation, recession impact, and business conditions) fail to attain significance, except in the case of a wrong sign for "business conditions about the same."[10] Thus, we must suspend judgment momentarily. PID appears to vary with the more complicated type of retrospective evaluation. Whether this speaks well or badly for a

TABLE 2

1976 PID by 1974 PID and RE

	One Stage	Two Stage
Presidential Performance	.46**	.52**
Nixon Pardon	.38**	.29**
Financial Situation – Same	.13†	.04
– Better	.11†	.02
Government Inflation Performance		
– Fair	.08	.04
– Good	.23*	.27*
Government Unemployment Performance		
– Fair	– .05	.03
– Good	.06	.20†
1974 Strong Democrat	–4.53**	
Weak Democrat	–3.56**	
Independent Democrat	–2.86**	
Independent	–2.40**	.74*
Independent Republican	–1.65**	
Weak Republican	– .97**	
Recession	.02	.01
Business Conditions – Better	– .10†	.09
– Same	– .25*	– .20*
Civil Rights – Too Fast	– .04	.04
– Too Slow	– .18†	– .16
Constant	4.01*	– .14
$\hat{R}^2$	.73	.39
rho	.83	.57
n	1,208	962

† $p < .10$
* $p < .05$
** $p < .01$

political theory of PID depends on whether the mediated retrospective evaluations themselves reflect objective events and conditions, or whether they merely reflect previous party attachments. So, we turn now to that question.

VI. THE INFLATION, UNEMPLOYMENT, AND GENERAL PERFORMANCE FUNCTIONS

Table 3 contains the estimates for the Inflation and Unemployment Performance Functions. These estimates give us ample reason for concluding that party identification changes in response to directly experienced economic conditions, for we see that such direct retrospective evaluations are important influences on judgments of government economic performance. The financial situation and business conditions variables are large and significant in both equations. Recession impact contributes to the judgment that government unemployment performance is poor, though the effect is not significant. Those nearing or experiencing fixed income status tend to be more critical of the government's inflation performance, while minority group members tend to be more critical of unemployment performance, though these relationships too are not significant. In short, table 3 shows that mediated retrospective evaluations reflect economics as well as psychology, and in combination with table 2 supports the conclusion that party identification does also.[11]

[Table 3 here]

And what of the presidential performance function?[12] Here too, matters look satisfactory. The financial situation variable is

TABLE 3

GOVERNMENT ECONOMIC PERFORMANCE FUNCTIONS

	Inflation	Unemployment
Financial Situation – Same	– .41**	– .40**
– Better	– .36**	– .33**
1974 Strong Democrat	.76**	.74**
Weak Democrat	.55**	.58**
Independent Democrat	.64**	.74**
Independent	.52**	.58**
Independent Republican	.15	.20†
Weak Republican	.35**	.26†
Recession	---	.08
Business Conditions – Better	– .70**	– .58**
– Same	– .26**	– .14†
Middle Class	– .05	---
Working Class	---	– .07
Age 60 & over	.06	---
Minority	---	.11
Constant	1.50**	1.35**
$\hat{R}^2$	.19	.17
rho	.27	.25
n	1,508	1,484

† p < .10
* p < .05
** p < .01

not significant, but the business conditions variable is, as is the
recession impact variable. The inflation and unemployment performance
variables are especially important (more so than previous party
identification, in fact) a situation we can regard with equanimity
having viewed table 3. In fact, if we turn back to table 1, it
appears that the original "simple-minded" analysis was not so
inaccurate after all. Even after developing a model which incorporates
the principal source of suspected spuriousness, the impact of economic
conditions and perceptions of government economic performance remains.

[Table 4 here]

By now we begin to see a pyramidding of effects. Directly
experienced and/or narrowly perceived economic conditions affect more
general economic performance judgments, both types of judgment feed
into evaluations of presidential performance, and the more general
judgments, at least, contribute to the modification of party identi-
fication. One question remains: does this pyramidding of effects
continue through to the vote function?

VII. THE 1976 VOTE FUNCTIONS

The vote functions estimated for the presidential and
congressional votes include PID_{p-1}, retrospective evaluations from
the pth period, and current issue evaluations (i.e. future
expectations). We have examined the first two components of these
functions, what about the third? The CPS surveys include several
items which appear to tap respondents' expectations about the future.
For example,

TABLE 4

THE 1976 PRESIDENTIAL PERFORMANCE FUNCTION

Nixon Pardon	.90**
Financial Situation – Same	– .01
– Better	.10
Government Inflation Performance	
– Fair	.64**
– Good	1.32**
Government Unemployment Performance	
– Fair	.51**
– Good	.83**
1974 Strong Democrat	–1.04**
Weak Democrat	– .56**
Independent Democrat	– .67**
Independent	– .42*
Independent Republican	– .21
Weak Republican	– .30
Recession	– .18*
Business Conditions – Better	.30**
– Same	.09
Civil Rights – Too Fast	.00
– Too Slow	– .68**
Constant	– .38†
R^2	.57
Correctly Predicted – Probit	79.3 %
– Null	63.8
n	1,210

† $p < .10$
* $p < .05$
** $p < .01$

Future Inflation Expectation. "Do you think that infla-
tion would be handled better by the Democrats, by the
Republicans, or about the same by both?"

Future Unemployment Expectation. "Do you think the
problems of unemployment would be handled better by the
Democrats, by the Republicans, or about the same by both?"

Future Problem Capability. "What do you think are the
most important problems facing this country? (Of all
you've told me), what do you think is the single most
important problem the country faces? Which political
party do you think would be most likely to get the
government to do a better job in dealing with this
problem--the Republicans, the Democrats, or wouldn't
there be much difference between them?"

We can use the preceding items to form indicators of issue
expectations, add these to the variables listed in table 4, and use
the set to estimate the vote functions. Unfortunately, there are so
many economic conditions/evaluations variables in the equations by
this point that few of them have statistically significant impacts
(although the goodness of fit they produce is excellent). Thus, I
report in table 5 a pair of abbreviated equations. First, direct
retrospective evaluations (financial situation, business conditions,
recession) are eliminated from the presidential equation. We have
seen that these contribute to the economic performance evaluations,
and (from analyses unreported here) they also contribute to the future
economic expectation functions. It appears to me that much of their

effect is indirect; certainly eliminating them causes no great loss
in predictive power in the presidential vote function. In addition,
only the issue concerns formed from the "most important problems"
item are included. Problems cited in 1976 were heavily economic
anyway, and when inflation, unemployment and most important
problems expectations are all included, the coefficients become a
mess. I chose to use the "most important problems" item because
it is the most general and thus seems to permit a better specification
than limiting issue concerns to economic ones.

[Table 5 here]

Table 5 presents the 1976 vote functions. Somewhat to my
surprise the most important influence on the vote appears to be
future expectations about the party best capable of meeting the
problems the country faces. Of course, an important determinant of
this expectation is past trends and conditions, as mentioned
previously. But at any rate, each of the components of the voting
model contributes significantly to the final decision. Party
identification from the previous period is highly significant, so
are retrospective evaluations from the current period. Table 5
yields a portrait of the voter as one who makes a decision based on
his hopes for the future, his current state of satisfaction, and his
more distant political experiences. And to reiterate, the more
distant experiences color the evaluations of recent events and
conditions, and both color expectations for the future. On the
whole I find this portrait quite plausible.

TABLE 5

1976 VOTE FUNCTIONS

	President	House
Ford Performance	1.24**	.60**
Nixon Pardon	.52**	.31**
Financial Situation – Same	---	– .03
– Better	---	.21†
Government Inflation Performance		
– Fair	– .01	– .23
– Good	.40†	.23
Government Unemployment Performance		
– Fair	.39**	– .02
– Good	.35†	.12
Most Important Problem		
Republicans Better	2.33**	.81**
No Party Difference	1.15**	.47**
Don't Know who is better	1.05**	.35
Civil Rights – Too Fast	.22†	.07
– Too Slow	– .78*	– .16
Party ID$_{1974}$	.43**	.34**
Constant	2.91**	1.43**
$\hat{R}^2$	.75	.40
Correctly Predicted – Probit	86.5 %	73.4 %
– Null	50.1	56.6
n	690	587

† p < .10

* p < .05

** p < .01

VII. CONCLUSION

Given the specific character of the foregoing work this is not the place for general conclusions. Still, there is at least some basis for reaffirming the title of the paper: economic conditions and evaluations appear to have both short and long-term effects on the vote. Previous micro-level research--my own included-- has found weak and inconsistent effects of directly experienced economic conditions. In this paper, however, we have seen evidence that directly experienced economic effects have indirect effects on the vote, effects channeled through evaluations of executive performance, and through modifications in party identification.

The voting model examined in the preceding pages is more complicated than those underlying aggregate studies of the PBC, but considerably more realistic as well. Do voters respond simplistically to an expansion-contraction dynamic set in motion by a cynical government? We may find some marginal impact of election year variations in macroeconomic conditions, but deeper, longer-lasting effects invisible to us may occur as well. A party could find itself trading off its long-term positive image and its committed adherents for an ephemeral and uncertain vote gain. Parties may choose to make that trade-off on occasion--Richard Nixon's 1972 presidential campaign is perhaps a case in point. But at least there is some reason to believe that the PBC chickens eventually come home to roost, as perhaps they did for Nixon's Republican party in 1974.

FOOTNOTES

1. The findings from this larger project will be reported in a book
    now in progress tentatively titled Retrospective Voting in
    American National Elections. I wish to acknowledge the important
    financial support of the National Science Foundation (NSF Soc
    76-02083) in making this work possible.

2. Kramer also included crude measures of incumbency and presidential
    coattails. Most of the aggregate analyses make some effort in
    this direction.

3. The two items included give us some rough indicators of Watergate
    and the racial issue, both of which played a role in the 1976
    election. The one type of variable missing from the specification
    is some indicator of foreign affairs, which while not terribly
    salient in 1976 plays some role in every presidential election.

4. The categorical nature of the dependent variables in this study
    (approve/disapprove, vote Republican/vote Democrat, strong
    Democrat/weak Democrat/independent Democrat/Independent/
    independent Republican/weak Republican/strong Republican) violates
    the assumptions of standard regression analysis. Specifically,
    heteroskedasticity results in biased estimates of the standard

errors of the estimated coefficients. Various alternatives are
available. The one chosen in this work is an n-chotomous probit
procedure developed by Zavoina and McKelvey (1975). It is a
generalization of ordinary probit based on the assumption that
the dependent variable has at least ordinal characteristics.
The procedure produces maximum likelihood parameter estimates
as well as estimates of thresholds on the (unobserved) continuous
dependent variable. These thresholds are assumed to determine
the correspondence between the observed discrete categories and
a range of values on the underlying unobserved variable. Hypo-
thesis testing is straightforward, but the goodness of fit
measures are less so. In the tables which follow we report $\hat{R}^2$,
an analogue to the familiar R^2 of standard regression analysis.
The former is intended as an estimate of the latter, and is
obtained by substituting the observed categorical values for the
unobserved values. The sampling distribution of $\hat{R}^2$ is unknown.
Typically it attains a higher value than the R^2 produced by an
OLS regression analysis of the same data. A second statistic
is the Spearman rank order correlation (rho) between the actual
and predicted values. The statistic is not very useful if there
are many tie values among the observations being correlated.
This condition is inevitable if one's dependent variable has only
a small number of categories (e.g. 0,1), hence I do not report
it for the dichotomous case. Finally, there is a percent correctly
predicted statistic. If an observation is predicted to lie
between two thresholds which correspond to an observed category

and it does, a correct prediction is recorded. In contrast to rho, this statistic is not so useful when the number of categories in the dependent variable is large: mispredicting a strong Democrat to be a strong Replulican is considered no worse than mispredicting him/her to be a weak Democrat. Hence I report this statistic only for the dichotomous case where no ambiguity arises. In the latter case I also report a null figure obtained as follows. If 85 percent of the sample approves the president's performance, a probit analysis which predicts 85 percent correctly does no better than the null model that _everyone_ approves the president's performance. In contrast, if only 50 percent of the sample approve the president's performance, an 85 percent correct prediction from the probit analysis is more impressive. The null prediction is always the proportion of observations which exhibit the more frequently observed behavior in the sample.

5. Note that no comparability assumptions are made here. For example, citizens might evaluate the candidates on different dimensions (both as to content and number), using different distance functions, different utility functions, etc.

6. Obviously condition (3) includes condition (2) as a special case.

7. It is worth noting that the proposed definition does not imply that the strength of party ID is interpersonally comparable. Behaviorally, people in the various categories of party ID appear

to behave roughly the same the country over. But there is nothing in current measurement methods (or the present model) which insures interpersonal meaningfulness of the party ID categories.

8. Kinder and Kiewiet (1979) have argued that "personal economic grievances" such as a worsened financial situation are less important influences on voting than are "collective economic judgments" such as government economic performance. Unfortunately, this distinction almost perfectly coincides with that between DRE and MRE. It is not yet clear whether the stronger statistical performance of the collective judgments reflects the collective focus or simply the fact that these items incorporate additional influences such as previous PID (table 3).

9. 1974 PID* was constructed by estimating actual PID as a function of dummy variables representing age, occupation, income, religion, ethnic, education and regional categories, plus others representing 1972 retrospective evaluations such as financial situation, unemployment, civil rights, etc. The $\hat{R}^2$ between actual and substitute PID is .28, rho = .49.

10. It is quite possible that anomolies like these stem from the intercorrelations among the right hand side variables.

11. The fits of these equations are the poorest of all that I have estimated. The distributions of responses to the economic

performance items are highly skewed, roughly 10:50:40 over the good-fair-poor categories. Other dependent variables in the analysis show much more even distributions.

12. Use of the term "performance" rather than "popularity" is deliberate. The survey item, after all, explicitly requests a performance assessment. Substitution of "popularity" implicitly suggests that the assessments are frivolous expressions of personal liking rather than substantive political judgments.

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