ECONOMIC CONDITIONS AND PRESIDENTIAL ELECTIONS

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INTRODUCTION

One of the more robust findings over the last 50 years in research on elections has been the importance of macroeconomic conditions on voting in U.S. presidential elections. Numerous studies (Kiewiet: 1983, Kinder: 1979, Erikson: 1989, Fair: 1978, Hibbs: 1982, Lewis-Beck: 1992) have shown that aggregate rates of change in unemployment, personal income, and inflation have a large effect on the vote for the incumbent. Yet few studies have attempted to distinguish on whom this effect is most pronounced. Welch and Hibbing have looked at different responses by men and women to economic perceptions. But Weatherford (1978) is the only scholar who has explicitly looked at the economic voting hypothesis disaggregated by class.

There is evidence that the rich and poor emphasize different aspects of economic performance, such as inflation and unemployment (Hibbs: 1982). It is common knowledge that rich and poor vote differently, and vote at different rates (Abramson: 1994,Leighley: 1992). But there is very little available evidence that bears directly on the question of whether the rich and poor weight the economy differently relative to other factors such as issues and party identification. Weatherford analyzed the presidential election of 1960, and disaggregated the sample of respondents based on class as defined by occupation: labeling one set of respondents working-class and another set of respondents as middle-class (Weatherford: 1978). He then utilized two questions measuring respondents' economic perceptions -roughly retrospective and current views of their personal finances- to create an index of economic perceptions. He then estimated a simple model postulating that the respondent's presidential vote was a function of their party-identification (as measured by vote during the previous election), and the respondent's index of economic perceptions. While all respondents were less likely to vote for the incumbent if they felt the economy was doing poorly, the standardized coefficient for economic perceptions was twice as large for working-class respondents as for middle-class respondents. Weatherford thus concluded that working-class respondents were "more politically reactive" to economic events.

We demonstrate that Weatherford's finding was extremely sensitive to the measure of class. When we re-specify Weatherford's model using respondent's position in the income distribution rather than an occupational measure of class, and re-estimate the model for 1960, Weatherford's result does not hold. Using an income based criteria for determining class, there is no evidence that lower class voters weighed the economy more heavily than middle or upper class voters in 1960.

We also examine whether Weatherford's result is unique to the particular elections he examined, or constitutes a regular phenomena. We estimate several models disaggregated by occupation based measures of class and income based measures of class for the years 1952 through 1996. Using the occupation based measure of class we find confirmation for the Weatherford result that working-class voters are economic voters to a larger extent than are middle-class voters in barely half the years we analyze (and the difference is statistically significant in only two of those years -1968 and 1976). Using the income based measure of class we find support for this in only two of our 11 elections (1964 and 1972).

After presenting our empirical work, we note that we think neither personal financial conditions nor national economic conditions are the 'right' measure of the economy that voters look at, and offer an alternative. We think the "pocketbook" versus "sociotropic" debate has essentially precluded more subtle, and ultimately more sensible, alternative micro-motivations. And we argue that there is a more sensible, and sensibly self-interested, model for voters to follow. What really should matter to voters is how their 'economic reference group' is doing[1]. We describe this in more detail following the analysis.

As we intend this piece as primarily a test of model specification and sensitivity to measurement, we lay out the hypotheses to be examined in brief form, and do not attempt to review the voluminous literature on economic voting. Our aims are in a sense limited. First, we want to simply test to see if Weatherford's result holds over the period since 1960, and whether it is sensitive to measurement choices. Second, we offer a theoretical innovation in discussing the micro level foundations of economic voting. We do not offer a test of that theory in this piece.

WEATHERFORD REPLICATION - 1960

In his original work, Weatherford disaggregated respondents by middle and working class using Centers' measure of occupational status (Weatherford: 1978)[2]. Centers defines class by occupational groups, asserting that occupational groups function much like interest groups, and that these occupational groups can be aggregated into broader definitions of social classes (Centers: 1949). The Centers measure places respondents in ten occupational categories (see Appendix A for a listing of categories). Using these categories, Weatherford defined unskilled and semi-skilled workers, skilled manual labor, and farm tenants and laborers as the working class. White collar workers, small business owners, professionals, large business owners, and farm owners and managers were defined as middle class[3].

Weatherford used an index combining respondents' evaluations of their current financial conditions and retrospective personal finances as a measure of individuals' perceptions of economic conditions[4]. The only factor Weatherford controlled for in his model was the respondent's party identification. He measured this using the respondent's reported vote in the prior election. We estimate a model identical to Weatherford's specification. And because there is no theoretical reason to combine the economic perception measures, we also estimate the effects of each economic perception variable separately. Testing the impact of each measure separately allows us to extend the analysis into additional elections in a more comparable manner, as one of the questions Weatherford used -the question on current financial conditions- has since been abandoned as current research has focused on retrospective versus prospective evaluations. Use of the separate economic variables should not change the substantive results. We expect to find that economic conditions will affect the vote intention of the working class more than it will affect the middle class.

We then have three specifications (one with each economic perception variable), each to be estimated over the two groups of respondents (working and middle class) separately. We expect that the coefficients of the economic variables will be larger in absolute value for the working class than for the middle class for both economic measures. Each individual economic perception variable is coded so that negative evaluations are assigned high values. Thus as our dependent variable is reported vote for the incumbent, we expect to see negative coefficients on these variables. We should get positive coefficients for the index variable that Weatherford used.

In Table 1 we report our attempt to replicate Weatherford's result using his index of economic perceptions. We are not able to get the same exact results Weatherford did. Our estimate of the standardized coefficient for the economic index for working class respondents is .071, whereas Weatherford estimated .157. However, our estimate for this coefficient for working class respondents is approximately twice what our estimate for middle class respondents is; and this is what Weatherford found and was the basis for his conclusion. Since the difference in magnitude between our coefficients and Weatherford's estimates could be the result of a different choice of scale for the dependent variable, it is this ratio of the coefficients that is most important. Thus our result is consistent with Weatherford's estimates[5]. And so both his result and our's suggest that working class voters are more sensitive to economic conditions than are middle class voters, when inclusion in the working class is based on respondents' head-of-households' occupations.

To test for sensitivity of the result to the measure of economic perceptions used, we estimated the model using each measure of economic perceptions separately. These results are also reported in Table 1. For both measures of economic perceptions (current finances and retrospective finances), the coefficients for the working class respondents are larger, in absolute value, than the corresponding coefficients for the middle class. Using the separate economic measures, we find the estimated standardized coefficients to be five times larger for the working class than for the middle class with either measure (-.043 vs -.009, and -.031 vs. .005, respectively). In addition, the coefficients for the middle class are not statistically significant at any traditional level for either measure of economic perceptions, while the working class coefficients are all significant at 0.05 or better. Thus these findings also support Weatherford's contention that working class voters are more sensitive to the economy than are middle class voters.

Weatherford 1960 Replication - Alternative measures of class

Now we test to see if the result Weatherford obtained in 1960 is sensitive to the choice of the Centers occupation based class measure over alternative measures of class, such as income. We compute

a new class variable based on self-reported family income. The bottom 54% of respondents are categorized as working-class, the upper 46% are categorized as middle-class. (This compares to the Centers Class variable: which categorizes 46% of respondents as working-class, and 54% of respondents as middle-class)[6].

In Table 2 we show the match between our income based measure of class (using the 1958 responses) and the Centers measure. Notice that there is remarkably little consistency. Only 54.5% of the respondents classified as working class by the Centers occupation measure are classified as working class by the income based measures. Of workers classified by the Centers measure as middle class, 67.2% of these are classified as middle class by the income based measure. All told, only 60.5% of respondents are classified as being in the same group by both measures in Table 2[7]. Admittedly the income based measure contains error: respondents may not truthfully report their income. But this large amount of disagreement suggests a more substantive difference between the two measures. This suggests a large problem with the occupation based measure of class. If we are measuring sensitivity to the **economy**, and the theory at hand is that respondents with low **income** will be most sensitive to change, then we think that favoring the income based measure makes sense. And sensitivity based on income is what Weatherford seemed to conclude: "working class citizens are more likely to deviate from their expected vote than are middle class ones, for the simple reason that the impacts of macro-economic cycles are unevenly distributed through the class structure" (Weatherford 1978, page 933). But if the occupation based measure 'works' in explaining differing levels of sensitivity to the economy, and the income based measure does not, then we would have to conclude that sensitivity based on poverty is not what drives the result, but some other facet of occupation.

In Table 3 we report results with respondents stratified based on income. When we disaggregated the sample into working class and middle class respondents using the income based measure of class, and reestimated the models we got completely different results! Here, rather than a larger coefficient for working class respondents, the coefficients for the index variable are almost identical across the two groups. This suggests that there is no difference between how working class and middle class respondents weight economic performance in their voting decisions. And the coefficient for the effect of respondents' view of current finances is larger for middle class respondents than for working class respondents. The coefficient for respondents' retrospective finances is significant and correctly signed for middle class respondents, and insignificant and even incorrectly signed for working class respondents. Both of these comparisons imply that middle class respondents weight economic performance more than working class respondents in their vote decision. Thus the Weatherford result is very sensitive to the measure of class. When class is measured based on family income rather than occupation, we find no evidence that working class respondents weight economic performance more heavily than do middle class respondents. And some of the evidence suggests that middle class respondents weight the performance of the economy more heavily than do working class respondents.

Of course in addition to testing the sensitivity of any finding based on model specification, it is a good idea to test the sensitivity to any result to the choice of elections. Would we observe the same result in years other than 1960? To test this we proceed below to estimate a similar model for the years 1956 thru 1996.

WEATHERFORD REPLICATION - EXTENDING THE ANALYSIS TO MORE YEARS

For the replication, we specified the dependent variable as the respondent's vote for president. A vote for the incumbent party is coded 1; vote for the challenger is 0. The primary independent variable is the respondent's subjective perception of the economy. We used two measures of the respondent's view of the economy: respondent's retrospective perception of personal finances, and respondent's retrospective perception of the national economy. The latter is not directly available prior to 1980. However, a question on retrospective evaluations of business conditions is available from 1968 thru 1980. We used this question as the measure of the respondent's view of the national economy for the elections from 1968-1976. We believe that the questions are measuring the same underlying concept[8]. We estimated models separately for each measure of economic perception.

We stratified voters based both upon their total family income and a measure of occupation. The family income question asks the respondent to estimate his/her yearly family income within a given range. To determine the class division, the frequencies for each range were calculated. The working class

is defined as the bottom half of the income distribution. The format of the responses made it impossible to define exactly one-half of the distribution. The division was made as close to the 50th percentile as possible. The middle class is defined as the top half of the income distribution. We recoded the question about respondent's occupation to create an occupational status measure, which we (hopefully) label 'Almost-Centers'. The coding of this variable is described in Appendix B.

In addition to economic perceptions, we included measures of party identification. We included two dummy variables: the first variable was coded 1 if the respondent identified with the Democratic party, coded 0 if not; the second variable was coded 1 if the respondent identified him/herself with the Republican party, coded 0 if not. Those who indicated no partisan leaning were the omitted category.

Table 4 reports the estimated logit coefficients and standard errors for the two groups disaggregated based on head of household's occupation for each of the 11 elections[9]. So we report 22 estimated coefficients for the impact of respondents' perceptions of their personal finances, and compare them pair-wise. The third column of estimates in the table gives the t-value for a comparison of the two coefficients for each year. Here the working class respondents do appear to be much more sensitive than middle class respondents to personal finances in six of our 11 elections: 1956, 1960, 1976, and 1988 thru 1996. The impact of the two groups' evaluations of the national economy on their vote-choices seem very similar to one another; none of the t-values reported in column 6 show a significant difference between how the groups weight the national economy in any of the elections from 1968 thru 1996. And occular analysis indicates that the values of the relevant parameters are relatively close to one another across the two groups.

The results reported in Table 5 are calculated in a manner identical to Table 4, except that here respondents are disaggregated based on income. Here the results are very different. In only 1964 and 1972 do we see support for the hypothesis that working class voters are more sensitive to the economy than are middle class voters. In those years the coefficients for perceptions of personal finances for the working class are at least twice as large as the corresponding coefficients for the middle class. However, note that in 1972 the coefficients for respondents' evaluation of national economic conditions are almost identical. And in 1956 we see that it is the middle class who appear to be more sensitive to changes in perceptions of personal finances than are the working class.

We have a bit of a paradox. How voters respond to their perceptions of their own finances and the national economy does not appear to be sensitive to their standing in the income distribution, while it does appear to be sensitive to their occupation. If we believe that the reason for a differential response would be a different sensitivity to economic pain, this is an odd finding.

ALTERNATIVE THEORY

The argument in favor of pocketbook voting has always rested on slightly shaky theoretical ground. As Kiewiet and Rivers argued (Kiewiet: 1985), a voter who receives a large inheritance from a dead relative -and hence observes an increase in personal fortune- should not necessarily be expected to reward the incumbent for his or her relative's demise. Similarly, a voter who experiences expected life-cycle increases in income should not necessarily attribute those rewards to the government. Yet the alternative theory in the literature, the sociotropic theory of voting, does not postulate voter altruism in suggesting that voters look at the state of the national economy. Rather the sociotropic theory postulates that the voter believes that the state of "the national economy" is the best predictor of how: 1) the voter's pocketbook will fare in the future, or 2) how good a job the incumbent is doing at handling the economy. But of course the primary reason for a voter to care about how good a job the incumbent is doing at handling the economy is because it suggests what influence the incumbent is likely to have on the voter's pocketbook in the future[10]. Thus the real question should not be whether voter's are sociotropic or pocketbook voters; but the real question is: what evidence does a voter look to as the best predictor of how well the economy will be *managed it towards the voter's interests*?

The typical voter probably is not going to have access to a large macro-economic forecasting model. So the criteria we should apply in searching for evidence a voter can use is that the evidence be: 1) readily available, 2) easily interpretable, and 3) that it actually predict how the voter will fare in the future. The state of the national economy fulfills these criteria only *if* we make several assumptions. The crucial assumption is that an improving national economy implies that *all* person's pocketbooks will be

improving. Of course if the national economy is improving it follows *that on average* person's pocketbooks will be improving; but a voter might want a better indicator. In particular, voters could be aware that the "national economy" could be doing very well, while they could be doing very badly. Even a relatively unsophisticated voter might notice that the problem with the national economy is that their economic class or occupation group might move differently than the national economy. If this is the case, then the national economy no longer fulfills the third condition above, and the voter needs an alternative economic indicator to use.

A plausible substitute for the national economy is some measure of how the voter's economic class or occupation group is doing. An important question then is: what is the voter's economic reference group? First, the voter could use workers in the same industry (i.e., automotive workers, aero-space workers, etc). Second, the voter could use workers in the same occupation: clerks, accountants, welders, assembly-line workers, etc. Third, the voter could use workers with the same education level. While workers at equivalent education levels may work in different industries, these workers are all substitutes for one another, conditional on some training. A high-school graduate in sector X could switch to being a high-school graduate in sector Y if sector X declines. We believe these sorts of models of voter response offer promise.

CONCLUSION

We have shown that when using income as a measure of class, there is no discernible tendency of working class voters to weight the economy more heavily than middle class voters. Using occupation as a measure of class, working class voters do appear to weight their perceptions of their personal finances more heavily than do middle class voters in some presidential elections (including the most recent ones). The differing results suggest that it is not safe to interpret occupation results as suggesting that *poorer* voters are most sensitive to the economy when making their vote choice. Thus by extending Weatherford's analysis over time, and testing for sensitivity to measurement issues, we demonstrate the dangers of drawing inferences from a single election or a single measure. More importantly, we provide a more reliable empirical foundation upon which to develop and
test theories of economic voting.

As we stated in the introduction, we know alot about the aggregate effect of the economy on elections (Kiewiet: 1983, Kinder: 1979, Erikson: 1989, Fair: 1978, Hibbs: 1982, Lewis-Beck: 1992). Understanding more about how this effect operates at the micro level is important. The macro economy is a big and complicated phenomenon. To believe that any single scaler representation of it such as the aggregate unemployment level or average change in disposable per-capita income provides a rich enough summary to accurately describe the economy's impact on elections is to carry the goal of parsimony to an unproductive extreme. A summary indicator of the economy may be correlated with election outcomes, but without a better micro-level theory we cannot truly say that we are "explaining much with little". We suggest that using measures of economic performance more closely tied to economic reference groups of voters will yield a better understanding of the mechanism by which economic performance affects elections.

Appendix A

Centers Occupational Status Groups

Large Business Owners
Professional
Small Business Owners
White Collar
Skilled Manual Workers
Semi-Skilled Manual Workers
Unskilled Manual Workers
Farm Owners and Managers
Farm Tenants and Laborers
Unclassified

Almost-Centers' Occupational Groups

Professional
Large Business Owners
Small Business Owners
White Collar
Skilled Workers
Semi-Skilled Workers
Farm Tenants and Laborers
Unskilled Manual Workers
Farmers and Farm Managers
Farm Owners and Tenants
Service Workers
Business Owners (size unknown)
Unclassified

Appendix B

We also create an additional occupation based measure of class. While the NES supplied Centers measure may be a useful occupation based measure of class, it is problematic for our purposes. The disadvantage to using the NES supplied Centers occupational status measure to separate respondents into a working class group and a middle class group is that only the 1956-1960 Panel Study includes this measure. It is not included in any of the NES Annual Surveys since then. Therefore, in order to replicate this work in later years, we needed to create a comparable variable using the annual survey data.

The first step in creating the Almost-Centers measure was to convert the 49 category NES head-of-household occupation variable into the 10 categories defined by the Centers' occupational status measure. All occupations coded in the professional and technical sub-group by NES were coded as professionals in the Almost-Centers measure. Occupations coded as large business owners and small business owners by NES were coded the same in the Almost-Centers measure. Respondents coded as managers, officials, or proprietors, and occupations coded in the clerical and sales sub-group by NES were all recoded to white collar. All occupations in the skilled workers and semi-skilled workers NES sub-groups were recoded to the comparable categories (skilled workers or semi-skilled workers). NES coded farm laborers were coded as farm tenants and laborers. Respondents coded by NES as other laborers or unskilled labor were coded as unskilled manual workers. The NES groups farmers and farm managers were coded as farm owners and managers in the Almost-Centers measure. All respondents coded as unemployed, students, retired, or housewives by NES were recoded as unclassified.

There were three NES categories from the occupation variable that did not convert easily to a Centers category. First, farm owners and tenants are two different categories in the Centers measure. Second, there is no specific category for the occupational sub-group for service workers that NES defines. Third, NES occupation categories include an option for business owners without specifying the size of the business. These respondents temporarily retained the original NES coding. When the occupational groups were recoded into class groups, these categories were also recoded.

After creating the Almost-Centers' variable, we created a dummy variable for the middle class following Weatherford's method. All occupations coded unskilled workers, semi-skilled workers, skilled manual labor, or farm tenants and laborers were coded as working class. White collar workers, small business owners, professionals, large business owners, and farm owners and managers were coded as middle class. We treat the unclassified category as missing data. From this framework, the two of the three `problem' categories were recoded. Business owners, regardless of the size of the business, were coded as middle class. Therefore, the unspecified business owners were also coded as middle class. We determined that occupations in the service workers category are more similar to working class occupations than middle class[11]. Thus, they were coded as working class.

The farm owners and tenants presented a more difficult problem. The Centers' measure puts farm owners in the middle class and farm tenants in the working class. As the NES data exists, there is no way to determine what proportion of these respondents fall into which category. Therefore, we were forced to treat farm owners and tenants as missing data.

To test this procedure, we computed our occupation measure using respondents' head-of-households' occupation as reported in the 1958 wave of the panel as this is what the NES-computed Centers measure is based on. 96.8% of respondents are categorized the same by our measure and a middle-class variable based on the actual Centers variable in the NES dataset used by Weatherford. Our Almost-Centers based measure puts approximately 3% fewer respondents in the middle class category than does the NES-computed Centers measure. We estimated the basic model using each of our three measures of economic perceptions with respondents classified as working class or middle class using the Almost-Centers measure (computed based on 1960 occupations). Not surprisingly, we get very similar results using the Almost-Centers Measure as we did with the Centers measure. The coefficients for the economic variable are again larger for working class respondents than for middle class respondents.

Table 1

Replication of Weatherford's Results - 1960[a] Dependent Variables: Vote for Incumbent for President

	Unstandardized Coefficients		Standardized Coefficients		Weatherford Results[b]	
	Working Class	Middle Class	Working Class	Middle Class	Working Class	Middle Class
Constant	0.142*	0.152*				
	(0.033)	(0.033)				
Party ID	0.451*	0.625*	0.444*	0.601*		
(Vote 56)	(0.043)	(0.040)				
Index of	0.027**	0.013	0.071**	0.032	0.157*	0.083*
Finances	(0.016)	(0.015)			(29.4)	(6.9)
Number of Obs.	456	424				
R^2	0.21	0.37				
Root MSE	0.44	0.40				
Constant	0.270*	0.177*				
	(0.053)	(0.048)				
Party ID	0.442*	0.626*	0.437*	0.603*		
(Vote 56)	(0.042)	(0.040)				
Current	-0.043*	-0.009	-0.132*	-0.026		
Finances	(0.014)	(0.014)				
Number of Obs.	457	425				
R^2	0.23	0.37				
Root MSE	0.44	0.40				
Constant	0.231*	0.143*				
	(0.055)	(0.049)				
Party ID	0.457*	0.623*	0.452*	0.598		
(Vote 56)	(0.042)	(0.041)				
Retrospective	-0.031*	0.005	-0.092*	0.013		
Finances	(0.014)	(0.014)				
Number of Obs.	460	426				
R^2	0.22	0.36				
Root MSE	0.44	0.40				

[a] Table entries are the coefficients for the variables indicated. Standard errors are given in parentheses. Class is defined by the Centers' measure. Observations include voters and the preferences of non-voters. The partyidentification measure is the respondent's vote in the 1956 presidential election.

[b] Values taken from Table 4 (p. 930) of the Weatherford article; standardized coefficients, F-statistics in parenthesis.

*p < .05 **p < .10

Table 2
Center's Class Variable and the Income Based Class Variable[a]

	Income-based		
Actual Centers'	Working Class	Middle Class	Total
Working Class	367	306	673
	(54.53)	(45.47)	(100.00)
Middle Class	193	396	589
	(32.77)	(67.23)	(100.00)
Total	560	702	
	(44.37)	(55.63)	

[a] Table entries are the number of respondents in each category. The numbers in parentheses are frequencies.

Table 3
Replication Using Income Based Class Measure-
Dependent Variable: Vote for Incumbent for President[a]

	Unstandardized Coefficients		Standardized Coefficients	
	Working Class	Middle Class	Working Class	Middle Class
Constant	0.249*	0.206*		
	(0.058)	(0.045)		
Party ID	0.455*	0.606*	0.440*	0.584*
(Vote 56)	(0.046)	(-0.037)		
Current Finances	-0.023	-0.031*	0.071	0.088*
	(0.015)	(0.012)		
Number of Obs.	415	522		
R^2	0.20	0.37		
Root MSE	0.45	0.40		
Constant	0.158*	0.190*		
	(0.064)	(0.044)		
Party ID	0.453*	0.615*	0.439*	0.593*
(Vote 56)	(0.046)	(0.036)		
Retrospective	0.007	-0.027*	0.019	-0.075*
Finances	(0.016)	(0.013)		
Number of Obs.	419	522		
R^2	0.19	0.37		
Root MSE	0.45	0.40		
Constant	0.182 *	0.120*		
	(0.037)	(0.029)		
Party ID	0.453*	0.613*	0.438*	0.591*
(Vote 56)	(0.046)	(0.037)		
Index of Finances	0.020	0.019	0.049	0.050
	(0.018)	(0.014)		
Number of Obs.	413	521		
R^2	0.20	0.36		
Root MSE	0.45	0.36		

[a] Table entries are the coefficients for the variables indicated. Standard errors are given in parentheses. Class is based on family income. Observations include voters and the preferences of non-voters. The party identification measure is the respondent's vote in the 1956 presidential election.
*p < .05 **p < .10

Table 4
Effect of Evaluations of Economic Conditions on Vote for Incumbent, 1956-1996
HoH Occupation-based Class Measure [a]

	Evaluation of Personal Finances			Evaluation of National Economic Conditions		
	Working Class	Middle Class	t-value of difference[c]	Working Class	Middle Class	t-value of difference[c]
1956	-.149**	-.051	-.668		-- --	-- --
	(0.083)	(0.121)				
1960	-.235*	-.064	-1.185		-- --	-- --
	(0.099)	(0.105)				
1964	.003	-.036	.310		-- --	-- --
	(0.093)	(0.085)				
1968[b]	-.089	-.265*	1.678	-.027	-.042	.129
	(0.069)	(0.079)		(0.076)	(0.088)	
1972[b]	-.085	-.105	.095	-.175**	-.167**	-.057
	(0.189)	(0.091)		(0.097)	(0.101)	
1976[b]	-.220*	-.051	-1.822	-.333*	-.243*	-1.017
	(0.069)	(0.062)		(0.066)	(0.059)	
1980	-.146	-.144**	-.017	-.090	-.160	.347
	(0.090)	(0.075)		(0.156)	(0.128)	
1984	-.197*	-.162*	-.300	-.489*	-.306*	-1.381
	(0.084)	(0.081)		(0.100)	(0.087)	
1988	-.228*	-.116	-.798	-.331*	-.287*	-.263
	(0.116)	(0.079)		(0.139)	(0.093)	
1992	-.268*	-.084	-1.240	-.619*	-.418*	-.935
	(0.123)	(0.083)		(0.177)	(0.122)	
1996	-.158**	-.111	-.403	-.416*	-.350*	-.396
	(0.091)	(0.073)		(0.132)	(0.102)	

[a] Table entries are estimated logit coefficients from a model where the dependent variable is the respondent's reported vote for the candidate of the incumbent party. The independent variables are the respondent's party-identification and evaluation of personal finances or of national economic conditions. Class is based on the Almost-Centers occupation measure for Head-of-Household.
[b] For 1968, 1972, and 1976 respondents' opinions of national economic conditions are measured by their response to national business conditions.
[c] t-value for test of significance of difference between estimates coefficients for working-class and middle-class respondents.
*p < .05 **p < .10

Table 5
Effect of Evaluations of Economic Conditions on Vote for Incumbent, 1956-1996
Income-based Class Measure[a]

	Evaluation of Personal Finances			Evaluation of National Economic Conditions		
	Working Class	Middle Class	t-value of difference[c]	Working Class	Middle Class	t-value of difference[c]
1956	-.148*	-.287*	1.654		-- --	-- --
	(0.052)	(0.066)				
1960	-.079	-.202*	.976		-- --	-- --
	(0.094)	(0.084)				
1964	-.154*	-.086	-.616		-- --	-- --
	(0.078)	(0.078)				
1968[b]	-.190*	-.206*	.160	-.103	-.042	-.556
	(0.074)	(0.067)		(0.079)	(0.076)	
1972[b]	-.253*	.024	-2.173	-.176**	-.157**	-.136
	(0.095)	(0.085)		(0.107)	(0.090)	
1976[b]	-.095	-.111**	.172	-.251*	-.288*	.418
	(0.072)	(0.059)		(0.067)	(0.058)	
1980	-.127**	-.133**	.058	-.247*	-.094	-.844
	(0.076)	(0.069)		(0.120)	(0.136)	
1984	-.277*	-.221*	-.524	-.429*	-.422*	-.061
	(0.077)	(0.074)		(0.083)	(0.079)	
1988	-.113	-.158*	.394	-.243*	-.302*	.445
	(0.087)	(0.074)		(0.101)	(0.086)	
1992	-.158*	-.170*	.132	-.297*	-.372*	.578
	(0.072)	(0.055)		(0.103)	(0.079)	
1996	-.157**	-.159*	.017	-.432*	-.451*	.112
	(0.089)	(0.077)		(0.130)	(0.108)	

[a] Table entries are estimated logit coefficients from a model where the dependent variables is the respondent's reported vote for the candidate of the incumbent party. The independent variables are the respondent's party-identification and evaluation of personal finances or of national economic conditions. Class is based on family income.
[b] For 1968, 1972, and 1976 respondents' opinions of national economic conditions are measured by their response to national business conditions.
[c] t-value for test of significance of difference between estimates coefficients for working-class and middle-class respondents.
* p < .05^** p < .10

NOTES

1. We do not know if Alesina, Londregan, and Rosenthal (1993) have put to rest the theory that voters can distinguish between government induced shock and exogenous shocks to the economy. But we treat voters as blaming or crediting government for performance of the economy.

2. The panel survey included the Centers occupational status variable as a separate variable (V502).

3. We assume Weatherford treated the unclassified category as missing data.

4. See Weatherford, page 923, footnote 3, for a description of the index. We computed the index as follows: index = 2 if ((personal-finance-current == 1) AND (personal-finance-retrospective == 1)); index = 1 if ((personal-finance-current == 1) AND (personal-finance-retrospective == 5)); index = 1 if ((personal-finance-current == 1) AND (personal-finance-retrospective == 3)); index = 1 if ((personal-finance-current == 3) AND (personal-finance-retrospective == 5)); index = 0 if ((personal-finance-current == 3) AND (personal-finance-retrospective == 3)); index = -1 if ((personal-finance-current == 5) AND (personal-finance-retrospective == 1)); index = -1 if ((personal-finance-current == 3) AND (personal-finance-retrospective == 1)); index = -1 if ((personal-finance-current == 5) AND (personal-finance-retrospective == 3)); index = -2 if ((personal-finance-current == 5) AND (personal-finance-retrospective == 5)). We believe that Weatherford's published work has two numbers transposed in the table, otherwise the above coding scheme would yield a perfect match.

5. However, Weatherford reported a significant estimate for the coefficient for middle class respondents; our estimate was not significant at traditional levels.

6. We also estimated models using income and occupation interactively with economic perceptions. This avoided making an arbitrary decision as to what percentile was middle class and what percentile was upper class. Results were similar to those reported below.

7. Controlling for life-cycle effects did not change this appreciably. Even comparing the income and occupation measures for 10-year age ranges -which should eliminate the life-cycle effects - the highest level of agreement we got across the measures was 67.3% for 41-50 year olds.

8. To test this belief, we compared responses to these questions in a year when both are available: 1980. In that year, the correlation for the responses to the questions is 0.20.

9. Using respondents' occupation yielded similar results.

10. See Kinder and Kiewiet (1979) for a discussion of this.

11. Over seventy percent of respondents coded as service workers report an income below the median. Also, the Centers class variable codes nearly ninety percent of service workers as working class.

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