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**ECONOMIC CONDITIONS AS CONTEXTS:
INFORMATION PROCESSING AND ECONOMIC VOTING**

By

JOHN E. HUGHES

**A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL OF THE
UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY**

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To my parents, who taught me to question,
and my wife Amy who kept me going.

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Any work of this magnitude requires more people than merely the name on the title page. This dissertation is no exception. First I want to acknowledge those who provided the data; the primary data sets were collected as part of the American National Elections Studies and were distributed by the Inter-University Consortium for Social and Political Research. Chris McCarty and the staff at the Bureau of Economic and Business Research helped me collect additional data. As always, all conclusions and errors are the responsibility of the author.

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Research on economic voting has left several questions unanswered. Some of these relate to what areas of the economy are used in holding politicians accountable. Does the public concern itself with only national economic conditions? Or are personal, state, and group economic conditions relevant? If so, how well does the electorate discriminate between these related areas? Other questions ask whether the relevant spheres of economic concern vary on the basis of personal characteristics. Are some people more likely to be pocketbook voters and utilize only personal economic evaluations when voting? Finally, past research has left unanswered the extent to which objective economic conditions influence economic attitudes. Do people draw on the actual conditions

surrounding them or do they rely upon the media, friends, and associates?

The research presented here attempts to answer these questions.

First I examine the ability of the electorate to discriminate between personal, group, state, and national economic conditions. The results indicate that people are clearly able to distinguish between these economic spheres. In addition, one's level of education or interest in the campaign has no effect upon his or her ability to make those distinctions. The least interested voters perceive the economy and its various spheres in much the same way as the most politically absorbed. That is not to suggest that they reach the same conclusions, but simply to argue that their perceptions are equally well structured.

The second stage of this research examines the way people actually utilize economic information when voting. The results indicate that people who are less interested and less educated rely more heavily upon personal level economic information. Those with more education or more interest tend to be more nationally oriented. The results are less clear with regard to the effect of the economic context. No clear pattern of significant results emerges; most of the estimated coefficients are simply not significant. The electorate shows no apparent tendency to use objective economic conditions in their voting decisions.

CHAPTER 1 INTRODUCTION AND LITERATURE REVIEW

A simple banner hung in Clinton's campaign headquarters reading "It's the economy, stupid." For many this became the rallying cry of the 1992 election while for others it simply typified the sense that then President Bush was doomed to defeat by economic forces he could no longer affect. But even so simple slogan poses complex questions that political science has been struggling with for two decades. During the course of the debate the questions of whether, to what extent, and how the economy matters have become increasingly important.

The research proposed here has two goals. First, it will examine the attitude structure of economic evaluations and apply that to economic voting decisions. The general argument is that political sophistication will affect the types of information used in reaching judgments concerning the condition of the economy. Most research on economic voting suggests there are only noneconomic voters and economic voters. But this research will examine the existence of different types of economic voters as well. Where similar arguments have been made previously they lack a clear description of the sources of different economic voting calculations.

In addition, this research will offer more detailed individual level examinations of the impact of state and local economic conditions and their relationship to national economic conditions. A few individual level studies have examined the effect of local or state economic contexts on citizens' perceptions of the strength of the economy. These studies generally use aggregate data which can confirm the existence of a relationship but offer little insight into personal motivations or decision making processes. Additionally, the studies that do perform individual level analyses tend to focus upon the electorate as a whole. This research examines, in increased detail, the possibility that various subsets of the electorate utilize economic evaluations differently. I begin by inspecting the relationships between cognitive resources and the economic evaluations potentially utilized in vote choice decisions. Do levels of education, interest, or media attention affect the way people organize their judgments concerning the economy? This question is examined by testing several areas of economic concern.

The results presented in this dissertation are aimed at two groups of researchers. For those studying overt political behavior these analyses examine several models of economic effects on vote choice. For those interested in understanding how people structure their beliefs this dissertation will explore some sources of systematic error or bias in economic judgments. The central role held by economic conditions in electoral contests makes any potential bias especially important.

Additionally, economic evaluations do not contain the problem of normative evaluation discussed in studies of ideology and consistency. This helps make them an excellent context for examining the way people integrate attitudes.

Before proceeding further a note on the structure of this research may prove useful. The bulk of this chapter is devoted to outlining previous research in the areas being studied here. This outlining includes both a literature review and the logical foundation for the research that follows in Chapters 3 and 4. Chapter 2 is devoted to the methodological concerns surrounding this type of research. It describes the methods chosen for the analyses and details the data used. Chapters 3 and 4 constitute the analysis portion of the research. They are detailed more fully at the end of this chapter and also in Chapter 2. Chapter 5 offers a summary of results, conclusions with regard to any benefits derived from this line of inquiry and suggestions for continued research.

Economic Evaluations and Constraint

The literature on economic voting has most commonly addressed economic judgments as simple evaluations of some object such as the national, local, group, or family economic condition. Economic judgments are, however, far from simple. Weatherford (1983b) addresses this, noting first some of the problems facing the electorate if they choose to use economic information in presidential elections. The electorate not only has a

choice of economic referents-- Weatherford examined personal and national conditions--but must also obtain the information necessary for reaching a judgment of the economy. It is the information gathering and processing strategy, Weatherford argues, that partially determines which of the two economic spheres the voters utilize. He goes on to demonstrate that people with higher levels of cognitive resources, as measured by use of the media, make greater use of national level economic judgments, while those with fewer resources rely more heavily upon personal economic evaluations.

Many researchers, however, offer limited or no evidence regarding the differential use of economic information among the electorate. For example, both Conover (1985) and Kinder, Adams, and Gronke (1989) control for education, but only partially examine the effects of cognitive resources such as education, interest, or campaign knowledge, upon the economic assessments themselves. Specifically, Kinder et al. show that education alters people's perceptions of the national economy but show nothing about whether it alters how they use the various economic evaluations (1989, 511).

Education, they argue, influences whether a person views the nation as being more or less prosperous with more highly educated people perceiving the nation in a more positive light, at least in 1984. A bias in direction is certainly of substantive importance. The extent to which economic judgments are based upon pure economic facts versus personal perceptions holds great importance for understanding how individuals vote.

Education can be seen as affecting vote choice both directly and indirectly through its influence on economic perceptions. The important point, however, is that the impact is assumed to be causal: education directly changes economic judgments.

If Weatherford is correct in that some groups of people are much less likely to rely upon national level evaluations, then a bias in direction as demonstrated by Kinder, Adams, and Gronke may actually have less electoral impact than does the fact that some economic spheres are utilized differentially. Weatherford's research suggests that attention to the campaign or similar characteristics, might have a different indirect effect by altering the weight or importance given to each economic concern. His evidence suggests that some groups of people will fit the "pocketbook" voter model and others the sociotropic model. More importantly, these two types of economic voters can be identified, in part, by demographic characteristics. This nuance is missed by most past research.

Some recent research, however, has shown that individual characteristics do play a role in how economic spheres are utilized. The foundation for this line of research is offered by MacKuen, Erickson and Stimson (1992) who argue for a "peasant-banker" dichotomy in economic voting. They suggest that "Peasants" are those voters that base economic judgments primarily upon recent, retrospective, economic performance at either the personal or national level. "Bankers," by contrast, rely more

heavily upon prospective evaluations in their economic voting decisions. MacKuen and Mouw (1993) expand the peasant-banker thesis by arguing that the two categories fall naturally into social class theory. They find that the higher a person's socio-economic status the more likely he or she will engage in "banking" behavior with the reverse being true for retrospective evaluations. These findings will be addressed in more detail below.

Research such as MacKuen and Mouw has been the exception rather than the rule. The more common trend among economic voting researchers has been to ask one question, namely "Do citizens distinguish between economic spheres?" An answer of "yes" is expected for personal versus national economic conditions. Clearly the condition of one's family is easily distinguished from the condition of the nation. For personal and national spheres versus group based judgments the answer is less intuitively obvious.

However, both Conover (1985) and Kinder et al. (1989) provide affirming evidence with the latter being the most complex and convincing. Conover finds first that group, personal, and national economic evaluations are related but distinct attitudes. Second, she shows that group economic evaluations influence evaluations of the President's job performance, his handling of the economy, the government's handling of inflation, and the government's handling of unemployment. Kinder, Adams, and Gronke provide more detailed results with regard to economic voting. Using

confirmatory factor analysis they support Conover's finding that personal, group, and national economic judgments are distinct from one another. They go further, however, by connecting these three economic spheres to vote choice. Using two-stage least squares they find that personal and group economic judgments influence national economic evaluations which in turn affect vote choice.

Yet neither address whether this finding, while true for the "average" or typical respondent, remains true for specific populations. Research in cognitive constraint and political sophistication using other types of political attitudes suggest that the attitudes are not structured the same for all types of voters.

Cognitive Constraint and Political Attitudes

Cognitive constraint is a venerable research topic in political science. Philip Converse provides the foundation for this line of reasoning and research. He argues that attitudes are structured into belief systems containing many various individual attitudes that are of a similar nature (1964). A belief system acts as a foundation, or framework, for collecting and organizing attitudes into a coherent and useful whole. In order to measure the existence of belief systems Converse suggested the idea of constraint. Constraint refers to the idea that attitudes built upon a single belief system, in this case liberal-conservative ideology, would be constrained by that system. The attitudes would share similar properties and directions such

that knowledge of a person's position on one issue should predict their position on a different but related issue. Constraint is not an absolute but a matter of degree. Some attitudes will be more or less constrained than others. In fact, he finds the general public has far lower levels of attitudinal constraint than elite individuals owing, he argues, to more limited informational or cognitive resources.

Affirming, extending, denying, or limiting Converse's findings has been a common exercise in political science (for a review see Luskin, 1987). However, because most research focuses upon ideology as the structuring principle under examination, the conclusions of this literature are secondary to the purpose at hand. Rather, it is the logic and methodology that will be utilized here to address the structure of economic judgments.

As noted above, Chapter 2 will delve more deeply into the methodology of measuring constraint; here it is necessary to address the application of the concept of constraint to economic judgments. Liberalism and conservatism are part of an overarching political philosophy representing a range of preferred alternatives regarding governmental action. Clearly, ideology deserves the title of belief system, but can the same argument be made for economic judgments? The answer is not readily obvious. Economic voting is based upon summary judgments regarding objective changes in the financial condition of various individuals or groups. One implication of this is that the judgment should be flexible--responding

to the information the individual receives. As new information is received, the attitude is expected to change or update. By contrast, ideology, while not fixed, is understood to structure new information, not be altered by it (Lodge and Hamill, 1986). This is obviously not the case for economic judgments.

Then why search for constraint, or attempt to use it, when the subject of the current investigation is so different from the subject of previous studies? The most basic answer is that while economic judgments are not the same as political ideology, they do share some important similarities. Both ideology and economic judgments represent the culmination of decisions regarding a series of attitudinal objects. In the case of ideology, those objects are policy positions while for economic judgments those objects are assessments of the performance of the economy. In both cases, holding a particular position on one policy or judgment suggests that a person will hold similar positions or reach similar judgments for all similar objects. For example, one question posed here asks whether a person's opinions concerning different areas of national economic conditions are constrained by each other. More broadly, are other economic attitudes constrained by national judgments? In either instance reaching a judgment concerning one object should help predict the judgment of another. In short, both ideology and economic evaluation share a single, but predominating aspect; they are both domain specific areas within which various positions can coexist should show evidence of a common structure.

A second, and more compelling, reason for applying the idea of attitudinal constraint is the fact that constraint can be seen as one dimension of a broader subject of research, sophistication (Luskin, 1987). Luskin details three dimensions of sophistication-- size, range, and constraint. Size refers to the number of cognitions, memories or thoughts, that are related to a specific attitude. Range describes the breadth or focus of the attitude. Constraint measures the degree to which related attitudes are interconnected. Because this research focuses specifically on economic attitudes only a limited amount of attention can be paid to the range of the attitude. Because the data are limited to the specific questions asked of the respondents the size or number of cognitions cannot be measured. So of the three dimensions of sophistication only constraint will be considered here.

Constraint offers a logical foundation for examining the way personal characteristics influence economic voting. Rather than simply control for education as previous research has done, the application of constraint allows the researcher to posit different types of economic voters utilizing different judgments in order to reach an electoral decision. Controlling for factors such as interest and education consistently demonstrates, for example, that much (most) of the electorate does use economic evaluations. Yet, as MacKuen and Mouw (1993) and Weatherford (1983b) point out, such use is not uniform across individuals. Constraint offers a theoretical framework for examining the potential types of economic voters.

Past research suggests two characteristics likely to influence the cognitive structure of political attitudes. The first and most obvious is education. Barton and Parsons (1977), Converse (1964), and Stimson (1975) have each found education is related to both constraint and their interpretation of political sophistication. Perhaps more important to the present study, MacKuen and Mouw (1993) show that education is directly related to perceptions of the economy. Similarly, interest and attention to the media have been shown to influence political attitudes, especially economic voting (Weatherford, 1983b). Accordingly, education and interest in the campaign will be used to examine constraint more closely.

The analysis of constraint has two sections. The first section examines the levels of intra-sphere constraint along with their demographic antecedents. That is, first it must be determined whether evaluations concerning a single economic sphere such as national economic conditions are constrained by each other. For example, are people consistent in how they view the national economy? If they are, then their responses to multiple questions pertaining to one economic sphere should be consistent.¹ In addition, it is hypothesized that those with greater levels of education or attention to the campaign will evidence higher constraint or more consistent responses. Second, the levels of inter-sphere constraint must be examined.

¹Taking my cue from both Fiorina (1981) and MacKuen, Erikson, and Stimson (1992), I distinguish, wherever possible, between retrospective and prospective economic judgments.

Are evaluations constrained across different economic spheres? Here, however, the general trend of higher constraint being equated with higher cognition may be reversed. Distinguishing between the four potential economic spheres requires relatively high levels of information and political acumen but would be evidenced in part by *lower* levels of constraint. The basis for expecting lower constraint among more sophisticated individuals is discussed in more detail in Chapter 2.

Constraint, then, provides a measure of the structure of economic perceptions within the electorate and specific subsamples. Using this construct I can begin to investigate whether economic evaluations are structured differently for different groups. Certainly there is no reason to expect all people to be economic voters, so the question is whether groups of people differ systematically in their utilization of economic perceptions in reaching their voting decisions. As described in more detail below, the answer to that question may offer an alternative explanation for why some people are pocketbook voters and others are sociotropic voters.

A Review of Economic Voting

Having set the stage with the structure of economic evaluations it is possible to move on to economic voting itself. Most research has focused on two models of economic effects for vote choice. The first theory, originally labelled "pocketbook voting," contends that voters are primarily interested in using elections to maximize personal gain (Downs, 1957). They reward or

punish administrations whose policies have proven beneficial or harmful to their personal financial condition. An intuitive argument, it first garnered considerable support from several studies demonstrating that declines in average real income or increases in inflation hurt the incumbent (defined here and throughout this research as the party, or candidate of the party, that controls the presidency) while increases benefitted the incumbent party (Bloom and Price, 1975; Kramer, 1971; Metzger and Velrath, 1975; and Tufte, 1978).

The pocketbook voting model quickly drew criticism. One critique is that the studies used aggregate level data such as a statewide vote division, national inflation, or income averages. With aggregate data the researcher collects values for a population and assigns each member of the population the same value based on a summary score for the group. For example, an aggregate measure of state income takes the median income for all people in the state and then assigns that value to each person for that particular state. Aggregate data are easily collected, easily analyzed, and remain one of the most powerful tools for social research. However, the results from aggregate analysis tell us that a relationship exists between broad economic conditions and collective electoral outcomes, but they are not designed to give insight into the actual motivations of particular individuals. Aggregate level results are, in fact, usually compatible with a number of conclusions about the reactions of individuals to economic changes (Kramer, 1971 and 1983; Tufte,

1975). These different effects cannot be distinguished by examining just aggregate data. For example, the researcher cannot conclude whether a voter casts his or her vote against an incumbent during a recession or is voting for an exceptionally good challenger who senses an opportunity to win. Despite this, most research focused on the idea that economic voting was based primarily on the pocketbook model.

Evidence from individual level analyses leads to an alternative model, termed "sociotropic voting," based on national economic conditions rather than personal. The key to the sociotropic conclusion is the finding that individuals tend to reward the President and his party when they perceive the national economy as being strong rather than when their own economic condition improves (Fiorina, 1978 and 1981; Kinder and Kiewiet, 1979 and 1981; MacKuen, Erickson, and Stimson, 1992). The use of surveys allows the examination of questions pertaining to perceptions of both personal and national economic conditions. Personal conditions generally obtain no or only marginally significant effects on vote choice when controlling for national economic conditions.

One study, however, does suggest that personal financial conditions influence vote choice (Markus, 1988). Markus uses survey data tapping personal economic perceptions and aggregate data measuring objective national economic conditions. He finds that both variables have a significant influence upon vote choice. Unfortunately, his results cannot be easily

reconciled with other research. Kinder, Adams, and Gronke (1989) suggest that group and perhaps personal economic conditions can have an indirect influence on vote choice. People's perception of the economic condition of their family and their social group influences national economic perceptions which in turn influence vote choice. If this is accurate, then Markus' results are due to the lack of an individual level measure of national economic perceptions. MacKuen, Erikson, and Stimson (1992) put this to a direct test and show that personal economic evaluations drop from significance to non-significance once controls for national economic judgments are included in the analysis (1992, Table 3).

For some, this appears to describe the American electorate as suspiciously altruistic. Feldman argues that such is not the case (1982). Rather, the electorate is acting rationally within the boundaries of the individualistic nature of American culture. People tend to accept responsibility for their own economic conditions while expecting the government to provide a healthy economic environment within which to pursue their aims. This eliminates a connection between personal conditions and the government while focusing on national economic expectations.

Thus the sociotropic model reaches three conclusions. First, the condition of the national economy, as measured by unemployment, inflation, and changes in the national income, has a significant and powerful impact

upon the percentage of the popular vote received by the presidential incumbent or his party. Second, this effect results from individuals rewarding the President or his party when they perceive the national economy as strong. Finally, one logic used to explain why national economic conditions matter is based on the idea that citizens want a prosperous environment even if they do not necessarily expect personal prosperity.

With this as a foundation, many modifications have been offered to clarify the relationship between voters, the economy, and the candidates. One argues that people take into account not simply the nation's condition but also how others similar to themselves have fared economically (Conover, 1985). This is an extension of the pocketbook hypothesis, but incorporates the logic suggested by Feldman. The social group model suggests that citizens, especially those with strong group attachments, may demand a positive economic environment for their group or people similar to themselves. Conover finds statistically significant relationships between group economic perceptions and candidate evaluations while others find a more indirect effect. Kinder, Adams, and Gronke (1989) argue that group considerations, like personal ones, affect perceptions of the national economy. Simply put, if a woman feels that women in general have fared poorly under the current administration she is more likely to perceive the general national condition to be weak and therefore less likely to support the incumbent's party.

A fourth economic sphere has been hypothesized with the incorporation of state level data. Researchers have found that statewide economic conditions affect vote division within individual states. State unemployment, inflation rates for individual states, and changes in aggregate state level disposable income each have been shown to affect the incumbent candidate or his party's share of the vote in that state (Abrams, 1980; Brunk and Gough, 1983; Holbrook, 1991). Abrams offers the most complete explanation connecting state conditions to national elections. Because state conditions vary greatly, and because states in many ways depend on federal policies, he argues that voters may use the condition within the state as a complement to or substitute for their evaluations of the national economic conditions.

Owing to their differing methodologies these three studies offer two distinct, but not entirely contradictory conclusions. Both Abrams and Brunk and Gough conduct cross-sectional studies, finding in each case that the economic conditions within states, measured at the aggregate level, affect the distribution of votes. Cross-sectional studies take measures across a series of units at a single point in time. In most cases the researchers measure economic conditions and the distribution of the vote across all states for one election. Using cross-sectional data they find that there are state-by-state variations in the percentage of the vote received by the incumbent that can be partially explained by the economic condition within

the states themselves. Contrasting these articles, Holbrook (1991) uses a pooled cross-sectional model. In his study measurements are taken across a number of units (states) but also across a number of elections. This provides the advantage of controlling for changing conditions over time as well as increasing the number of cases analyzed. Using this methodology, Holbrook is able to control for the condition of the nation's economy in addition to taking into account the conditions in each state. He concludes that once changes in the national economic condition are taken into account, the state economy has little or no impact on the distribution of votes within the states.

In order to reconcile these findings, and hopefully determine how voters structure economic attitudes, I begin by examining what evaluations the voters themselves might be using and how they may be weighted. Following Abram's logic they could use statewide economic information in one of two ways. First, a direct linkage model argues that voters view the state's condition as being separate from the condition of the nation, but still affected by Presidential policies. Stein (1990), for example, shows that gubernatorial and senatorial races are influenced by the public attributing responsibility for the state's economic condition to the President as well as the governors. Accordingly, previous statewide effects would be interpreted as voters rewarding or punishing the administration for the direct effect of their policies on the states. Secondly, at least two types of indirect linkage

may exist. In this first case voters would recognize that the strength of the state's economy is dependent upon the strength of the nation's economy. The latter model differs from the former in that indirect linkage voters are concerned with how Presidential actions affect the national economy and thereby affect the condition of the state's economy. In essence, voters with this predisposition might realize that their state is dependent upon the nation and therefore use the condition of the state in their evaluations of the nation. A second indirect mechanism would suggest that the state acts as the context from which economic information is gathered. This biases national level judgments by contaminating them with state level information.

Both of these theories can be contrasted with the direct model in which people are apparently more interested in how Presidential activities directly affect each state. Neither of these models have been tested because each is equally compatible with the aggregate results found thus far. Finally, there may in fact be no relationship between state economic conditions and vote choice.

Consider again the two contrasting results provided by previous aggregate studies. While Holbrook (1991) finds some evidence for state level electoral effects in his basic cross-sectional analysis, there is limited evidence for state level electoral effects once the changes in the national economy are taken into account. However, using cross-sectional studies, both Abrams (1980) and Brunk and Gough (1983) offer results indicating that

more prosperous states are more supportive of the incumbent's party. The question is how to bring together the cross-sectional results with the pooled time series results. Three models are required to reconcile these results.

Represented visually they are:

(1-1) State Conditions ———> Vote Choice

(1-2) State Conditions ———> National Conditions ———> Vote Choice.

(1-3) Objective Conditions ———> Economic Perceptions ———>
Policy Attitudes ———> Vote (Weatherford, 1983a, 868).

Model 1-1 depicts a direct relationship as found by Abrams and Brunk and Gough while Model 1-2 describes Holbrook's findings. Model 1-3 is taken directly from Weatherford's research. Note the ways in which Models 1-2 and 1-3 depart from each other. Holbrook uses actual national economic changes, but these cannot be altered by state conditions. That is, all people in every state at a given point in time experience that same national economic condition. It is a constant. Hence, everyone is part of the same national economic context. Holbrook recognizes this and employs pooled data so that he can measure different time periods and take into account differing national conditions. Having done that, he finds that national conditions do indeed negate any state level effects.

How can that occur? One possibility is that national economic conditions predominate as in Model 1-2, but that those conditions operate through perceptions which are biased by the objective economic conditions

within the states. Put more simply, a person living in a prosperous state will be more inclined than someone living in a state with a weak economy to perceive the nation's economy as prosperous despite the fact that both citizens are judging the same national economy. This would cause state-by-state variations in vote choice owing to state-by-state differences in the way the electorate evaluated the nation's economy, but these variations would largely disappear with controls for the nation's condition. For this to happen, the mechanism must be the individual level *perceptions* rather than the actual objective conditions since only perceptions can be affected by the conditions within the state. That argument is depicted in Model 1-3. To complete the picture all one must do is to note that the state and national conditions, as depicted in model 1-2, combine to form the objective conditions in model 1-3.

Weatherford provides support for the idea that state or local conditions matter using individual level analyses (1983a). He examines the effect of local economic conditions at the individual level by incorporating both aggregate economic information with survey data querying perceptions of the economy. Mixing both aggregate and individual level data allows the relationships between objective conditions, economic perceptions, and policy judgments to be disentangled.

Using the 1978 CPS National Election Study Weatherford finds that the unemployment rate of the Labor Market Area (LMA) has a moderate

influence upon perceptions of one's personal situation and a stronger effect upon national economic perceptions. Moving to the second arrow, he finds that the local context has no direct effect upon policy judgments but instead the context does have an indirect effect on policy attitudes through links to perceptions of both personal and national economic conditions. Despite the fact that all people are exposed to the same national economic conditions, the condition of the local Labor Market Area alters the way they perceive the condition of the nation. Unfortunately, Weatherford's data do not speak to the question of whether the local context has an effect upon perceptions of the state's or local area's condition. Nor does his research suggest which type of indirect linkage exists, whether or not it is a contextual effect. What is clear, however, is that objective conditions do alter perceptions of the national economy which in turn affects vote choice. These findings are most consistent with one of the indirect linkages as described above.

Finally, Model 1-3 also addresses an argument suggested by Kramer (1983). Kramer argues that aggregate level data better measure the variable of interest-- the relationship between changes in the economy and the vote. The reason, he suggests, is that individual perceptions are rife with error. Partisan bias, random error resulting from information gathering, and measurement error combine to make any relationship between vote choice and perceptions questionable. On the other hand, model 1-3 challenges Kramer by suggesting that some of the error is itself interesting.

Specifically, if perceptions of the nation vary as a function of the condition of the state then we learn not only that objective contexts affect information gathering, but that the vote distribution for any given state will depend in part on how that state has fared economically. This last argument is especially important given the importance of states as political units in the election of the President. The same logic holds true for any kind of systematic error relating to vote choice. After all, it is only through personal perceptions that objective conditions translate into votes for a candidate. Understanding the sources of error, given that the amount may be rather large, is crucial to understanding how and why the economy affects the vote. In short, a complete model of economic voting should include both individual level data, aggregate data, and measures of state and national economic perceptions. However, even an analysis meeting these criteria can be refined further. Weatherford again provides insight into the next stage of this research.

Information Processing and Interpersonal Contexts

Weatherford's interpretation of the linkage between objective conditions and personal perceptions is based largely upon information processing. He suggests that voters are confronted with two sets of disparate information regarding the ability of the current administration to manage the economy. First, there is national economic information which is readily available and highly relevant to the judgment task at hand. Unfortunately for the voter this information is both complex and often

contradictory. The second source is personal. He argues that voters are cautious when making inferences from personal experiences to national policy (see also Feldman, 1982), thus removing a potential source of information (Weatherford, 1983a, 869-70). The voter then turns to information gathered through contact with friends and associates. This information is more generalizable to the nation because it is more representative, easier to understand, and less equivocal.

A similar study is offered by Mutz in her examination of the information sources used in making economic judgments (1992). A portion of her results relate directly to Weatherford's research as described here. In a survey of Wisconsin residents she asked respondents how often their friends and acquaintances talked with them about their employment problems. The question is designed to measure the interpersonal contact suggested, but unverified, by Weatherford. The results based on this item support her hypotheses. First, interpersonal information has no effect upon evaluations of incumbents when controlling for personal and national economic perceptions, newspaper content, personal unemployment experience, and various demographic variables. Interpersonal contact does show a moderate effect upon perceptions of unemployment as a national or state problem but has no effect upon unemployment as a personal problem. Finally, interpersonal contact has a significant and large impact on subjective estimates of the rate of unemployment. In all, it conforms nicely to Weatherford's model (1983a) as it is depicted above.

An important pattern can be detected by examining the results provided by Weatherford and Mutz. Weatherford's contextual data obtains statistically significant results for national and personal economic perceptions as well as unemployment policies (1983a). Mutz finds that her interpersonal measure of the context is related to state and national economic perceptions. Weatherford did not test the effect of context on vote choice directly, but Mutz provides evidence that it has little or no direct impact on candidate evaluations. Together these studies suggest that the local context affects the way people perceive the condition of the economy at the national level. More broadly, these results indicate that the indirect effect of aggregate state economic conditions is due to the contextual effect of the state or local area. People living in more prosperous states will hear less about unemployment or financial problems from their friends. This in turn will be reflected in their opinion of the national economy.

Weatherford (1983a) suggests that information processing strategies account for why voters select different information from either personal, local, or national levels. In his research on the media he makes similar arguments, this time drawing more explicitly on social psychology (1983b). He argues that information utilized in vote choice decisions is tested by voters for two criteria. First, is the information accurate and verifiable? Second, does the information logically apply to the evaluation at hand (1983b, 34)? In terms of economic voting, he believes the voters are

confronted with a dilemma. The information that is most vivid and intelligible is the most personal and hence the least representative of the broader impacts of public policy. On the other hand, the information that is most representative is also the most difficult to understand and verify. Some voters will choose the latter and others the former. This has an intuitive appeal and Weatherford does provide supporting evidence (1983b). However, expecting voters to consider which data are most representative, or to ask themselves which source should be used the most for this particular decision seems unrealistic.

A similar, though somewhat simpler, explanation is suggested by MacKuen and Mouw (1993). In short, they suggest that those with information will use it and those without it will not. This departs from Weatherford in that MacKuen and Mouw say nothing about the accuracy or simplicity of the information. They do not presuppose that the individual faces a dilemma of the type suggested by Weatherford. Instead, MacKuen and Mouw suggest that the information used is predicated by the information available. If a person has attended to the media he or she will use whatever information that he or she has gathered from the "experts." The test of their argument almost perfectly matches that of Weatherford (1983b). The difference is that Weatherford divides his sample by attention to the media while MacKuen and Mouw use income and education. The results of these two studies are also quite similar. Both find that people

who pay less attention to the media, have lower incomes, or have less education tend to favor personal economic evaluations in their political judgments. These similarities make it difficult to determine whether one of their explanations is more accurate than the other. So rather than contrast the two, I offer an alternative, more easily verifiable, hypothesis.

I argue that the source of information utilized is not a function of intentional consideration on the part of the individual but instead the cognitive strategies employed by the voter. As noted above Weatherford suggests that the differential reliance upon personal versus national evaluations is due to choices over representativeness and ease of comprehension. MacKuen and Mouw suggest it is due to the simple availability of information. I suggest that the reason is based upon the degree to which the individual evaluations co-mingle. Rather than expect the electorate to make choices with regard to whether an information set is representative, this model expects that the information will be selected based upon availability but also that the availability will be dependent on the structure of the attitude or evaluation. Those with less well structured evaluations will have a greater degree of "mixing" of information across evaluative areas. The most prominent or most readily available information, whether personal, group, state, or national, will be utilized the most. Thus, a person who mixes both personal and national evaluations may evidence pocketbook voting since pocketbook evaluations are the most readily available.

Applying this to either MacKuen and Mouw (1993) or Weatherford (1983b), one can argue that those with lower levels of information are also likely to be the least interested and have opinions that are less sophisticated or constrained. Their responses will be more contingent upon memory searches and so they are the most readily affected by availability biases (Hastie and Park, 1986). The reverse is true for those with greater use of the media. This logic provides a more realistic set of reasons to explain the differential utilization of information by people with various levels of attention to the media. Rather than expect the voter to deliberately choose the most reliable source this model expects the source selected to be a function of the cognitive characteristics of the person, the demands of the task, and of how the decision maker and the decision task interact. If my argument is accurate, then the levels of constraint, or the degree of intermingling, among economic attitudes will vary with levels of education and attention to the media. Those with lower levels of constraint will rely more heavily upon personal judgments when making a voting decision; those with more constrained attitudes will show more evidence of sociotropic voting. Chapter 3 tests the levels of constraint and Chapter 4 examines the use of the various economic spheres in voting decisions.

Taking the economic voting literature as reviewed above, the logic of this dissertation is outlined. Chapter 4 begins with a general map of the relationships among the four economic spheres and vote choice. This map

requires, as mentioned, both aggregate and individual level data as well as measures of state economic perceptions. In addition, some measure is necessary to determine whether the aggregate state condition influences vote choice decisions itself, or is due to political discussion as suggested by Mutz. Ideally, the data should also include measures of group and personal economic evaluations as well. No large scale national dataset contains the data necessary to examine all four economic spheres, but the data are available from a statewide survey conducted by the Bureau of Economic and Business Research at the University of Florida (BEBR) during November, 1992.

The next portion of chapter 4 presents similar results from the 1984, 1988, and 1992 American National Election Studies data. The use of national level data serves two purposes. First it ensures that the results from the 1992 Florida data are not peculiar to that state or election. Second it allows for more detailed studies of the link between state and national forces owing to increased sample sizes.

Included in these basic models is the local economic context. This will help us understand whether voters are actively taking into account the objective condition of the state when deciding whom to support at the polls. Do voters ask themselves if a candidate (or his predecessor) has helped the state's economy, or, do voters view the state's condition as a subset of the national? What is the source of state economic information and is it related

to political conversation? Do state economic perceptions have a direct or indirect effect in voting decisions?

Based upon this foundation, Chapter 4 concludes with an examination of the cognitive aspects of economic voting by analyzing correlates of constraint, namely education, interest, and media use. Mutz (1992) and Weatherford (1983b) find that media use affects the utilization of economic information gathered from the local context. By re-estimating the paths presented in the first part of Chapter 4 it will be possible to determine if different decision making strategies are employed by people with differing levels of political sophistication. Those with lower levels of cognitive attention and resources are hypothesized to utilize more information that is personally relevant and easier to collect, i.e., personal and contextual information.

In summary, this research is intended to accomplish two goals. It should offer detailed analyses of how economic judgments are structured among different types of individuals. Are economic evaluations constrained? If so, how does that affect the research on economic voting? If not, what are the implications for studies of vote choice? The answers to those questions are expected to add to the literatures surrounding economic voting, policy attitude formation, and information processing. Second, these analyses should provide the foundation for the examination of economic voting itself. The research that is presented here should underscore the need for taking

into account both variations across individuals and their resources and variations in the settings in which those people live.

CHAPTER 2 DATA AND METHODS

As noted above the analysis portion of this research is divided into three parts. The first section examines the levels of constraint among the various economic evaluations thought to be related, directly or indirectly, to vote choice. The second section provides a basic map of economic voting. The map includes not only how each economic attitude relates to the others but also how they are related to apparent personal and political sources for economic attitudes.

This map, when combined with the evidence concerning constraint, should help answer the questions still left unclear after examining the current literature. Are the economic spheres independent of each other, particularly state and national evaluations? Do they relate directly or indirectly to vote choice? What are the sources, both personal and political, of economic judgments? To answer similar questions, previous research has relied heavily upon survey data. But each of these analyses has been flawed in one or more ways that will be addressed here. The final section adds the refinement of examining the use of economic evaluations within subgroups of the electorate. This makes it possible to determine whether there are different types of economic voters or whether certain biases in evaluating economic information result in creating types of economic voting.

Measuring Constraint

Constraint, in its most basic definition, refers to the degree of consistency between various attitudes thought to be related by some underlying factor (Converse, 1964). In practical terms this works out to be the similarity or dissimilarity of responses to questions that are believed to be related to each other. The higher the level of constraint or consistency, the greater the imputed level of sophistication and understanding attributed to the individual. The simple nature of the idea, however, is contrasted by the complex nature of measuring or documenting its existence.

Over the years there have been many arguments concerning the most appropriate way to measure constraint. Converse, limited by the state of the science, relied upon correlations among various policy responses. He found that the average Goodman/Kruskal Gamma coefficient was higher among an "elite" sample as compared to a sample of the mass public. This greater degree of correlation is seen as evidence of increased constraint. That is, the higher the correlation the more likely a person's opinion on one policy area can predict accurately that person's position on a related policy area.

The methodology, and at times the conclusions, have drawn increased attention as the discipline has evolved. One of the most influential recalculations of Converse's work is Stimson's (1975) research on the 1972 election. He uses exploratory factor analysis to estimate the number of underlying attitude structures for each group of people. Factor analysis

examines a number of items, or questions, and searches for patterns of variation among the responses. It goes beyond correlations in that factor analysis detects the underlying construct that causes the intercorrelations. For example, if two policy positions are correlated because they are both related to an unobserved factor such as liberalism then a factor analysis should find that both variables "load" on a single factor. Additionally, factor analysis computes the amount of variation that is explained by the factors. In all, factor analysis offers a more logical and powerful tool for examining constraint. Using it, Stimson finds that the higher the level of political ability (education and information) the fewer the factors that are required to explain the variance in the responses. In short, he confirmed Converse's findings in that those of higher political sophistication had more constrained attitude structures than those with lower levels of sophistication.

Despite its advantages, critics of factor analysis as a measure of constraint point out that it still contains a major flaw. Barton and Parsons point out that simple correlation coefficients cannot accurately measure the concept of constraint (1977). Both correlations and factor analysis rely upon divergence from a population mean for a variable. The correlation provides an aggregate score for a group rather than for individuals. Like all averages, the aggregation can often be insensitive to diversity or ranges of responses within the group. More specifically, they suggest that if a researcher compares two groups of respondents, one with heterogenous or diverse

attitudes and the other with homogeneous attitudes, a correlation coefficient will be inaccurate. Correlations can, mathematically, report a zero relationship due to the relative diversity of the responses rather than the consistency of responses. Since consistency is the property purportedly being measured and tested in studies of constraint Barton and Parsons offer this argument as evidence that correlations cannot serve as an adequate measure of constraint (1977).

Accordingly, they provide a new measure that is based upon individual level responses and their consistency. They examine the responses for the individual respondents in a sample and compute the amount of variation among those responses. That is, the Barton and Parsons statistic determines how closely responses to a series of questions match. Consistency is measured directly, by examining the deviation of responses to multiple questions. When a respondent provides similar answers he or she will have a lower standard deviation. The deviations measured can then be aggregated into groups representing the populations of interest. Despite their criticisms, however, they reach essentially the same conclusions as past research. Most important for the present purposes they find that education leads to greater consistency or constraint.

Others have adopted newer factor analytic techniques. Jackson (1983), Judd and Milburn (1980), Knoke (1979) and Peffley and Hurwitz (1985) all use confirmatory factor analysis (CFA). This method allows the

researcher to define the factors being tested *a priori* and then determine the fit of the data to the posited model.

The power of CFA techniques be can easily seen when they are contrasted with traditional factor analytic models. Stimson, typifying the problems of exploratory analyses, finds that even when examinations of two groups produce the same number of factors, the factors themselves differ (Stimson, 1975). In his examination of constraint based upon quartiles of education, he found that both the highest and second highest educated groups structured their attitudes with two factors. These factors can be interpreted as being similar, but there were several questions that loaded differently for each group (1975, 409). These differences make the factors difficult to objectively compare. Subjectively the similarity or comparability can be argued, but objective conclusions are impossible.

This problem is not present in confirmatory models which allow direct hypothesis testing with regard to the factors and loadings. For example, it would be relatively easy, using CFA techniques, to determine whether the factors found by Stimson were the same. The researcher can posit the variables that are thought to be important as well as the factors on which they should load. That model can then be tested for how well it fits the data. The researcher predetermines which factors are to be tested and which variables will load on each factor. He or she then tests to determine if the hypothesized factor(s) adequately fit the data and whether the variables load as predicted. In this way the factors can be determined on

the basis of theory and then the theory can be tested. CFA also makes it possible to determine whether the same model (two factors with X variables) fit the same for different populations or different sub-populations within a dataset. If the fit is statistically worse for one group than for another we know they do not share the same attitude structure.

Alternatively, the researcher might posit several potential models and determine which one fits each subgroup best. For instance, we might create three models representing increasing constraint and test them for each subgroup. If the less complex models provide the best fits for those with less education then we could conclude that constraint is the likely cause.

The advantages of CFA address one critique offered by Barton and Parsons in that hypotheses can now be formed *a priori* and tested for their fit to the available data. The other critique, specifically that the use of overall aggregate means provides too dull an instrument, is addressed by employing their technique as well. These two techniques complement each other in more ways than merely covering the methodological bases. More importantly, each provides an ideal method for examining a different aspect of attitude formation. Unlike ideology, economic attitudes are multi-dimensional. That is, there are at least four economic spheres or areas of concern; personal, group, state, and national, with each in turn being composed of retrospective and prospective evaluations. This means that constraint can exist both within (intra-sphere) and across each sphere (inter-

sphere) of economic judgments. For example, intra-sphere constraints addresses whether people respond to one question concerning the national economy in a way similar to their answers for other questions related to the national economy. In contrast, inter-sphere constraint would be demonstrated by a person answering questions about the nation in a way similar to questions about the condition of people similar to herself. The Barton and Parsons methodology is ideally suited to measure intra-sphere constraint since it emphasizes individual deviations in responses to similar items. On the other hand, CFA techniques are well suited for testing whether the potential economic spheres are actually perceived as being separate by the public (Kinder, Adams, Gronke, 1989).

Thus, Chapter 3 will employ Barton and Parson's measure of constraint along with parallel examinations using confirmatory factor analytic techniques. A complete description of the technique itself is provided in chapter 3. For now, it is important to simply note that the two methodologies employed later each address a different question. CFA will help determine the extent to which voters distinguish across economic spheres (inter-sphere constraint) while the Barton and Parsons statistic (BP) examines intra-sphere evaluations. The expectations are that those with higher education, interest, and media usage will have higher degrees of consistency within the various economic spheres.

The reverse however, is expected for consistency across spheres. Both Conover (1985) and Kinder, Adams, and Gronke (1989) suggest that distinguishing between the various economic spheres is a necessary condition to utilizing the information in a vote choice decision. Naturally there is some degree of covariation among group, personal, and national economic spheres. If a person is black, and notes that blacks have fared poorly then that person, on average, will be more likely than his or her white counterpart to respond that his or her own family is doing poorly. That is simply the nature of averages. Yet, if these are separate areas of economic outcomes, then there will be some variance. As the nation goes, so too will the general population, but the fit is not perfect. Recognizing the differences requires both a level of information and attention that is increasingly unlikely as one moves down in terms of sophistication. Sophisticates will be able and willing to disentangle the spheres, non-sophisticates will evidence greater consistency across spheres under the logic that they will use what limited information available to them to reach conclusions about all related areas. Weatherford's findings (1983a) concerning local contexts and national perceptions are an example of this effect at work.

Economic Voting Models

The research offered here combines results from past research on economic voting. This entails addressing as many different economic spheres as possible. Ideally, at least four spheres would be examined in a

single analysis. Personal, group, state, and national should all be analyzed together. Unfortunately that remains impossible given the available data. To approximate a complete analysis, however, the data here will model all four spheres in various combinations using parallel analyses. While unable to provide complete details with regard to how each economic sphere relates to the others, it will still provide a basic map that will be helpful for future research. Also drawn from past research are various predictors of economic attitudes. These include both demographic and contextual variables that have never been combined into a single analysis. Before turning to the logic of the analyses themselves, a brief discussion of their theoretical foundations is provided.

Holbrook addresses both state and national economic forces with an aggregate pooled cross-sectional model (1991). As already noted, his research concludes that shifts in the economy at the national level overshadow changes in state conditions. In order to understand Holbrook's results in light of those provided Abrams (1980) and Brunk and Gough (1983) the analyses must shift to the individual level. This makes it possible to test the link between objective conditions and economic evaluations while controlling for all or most potential spheres of evaluation.

As described above, Weatherford finds that aggregate economic conditions affect attitudes beyond the ones to which the objective conditions are most strongly related. Using 1978 National Election Studies/Center for Political Studies (NES/CPS) he finds that the economic condition in the local

area affects not only what people said regarding their personal economic conditions but also how they judge the economy in the nation as a whole (1983a). Returning to Holbrook's findings (1991) we see that his results are complemented by Weatherford. For example, Holbrook finds, as does Weatherford, that national economic forces are more closely related to a person's vote choice than state economic forces. In addition he shows that at one level the economies of the states are linked to vote distributions. But Holbrook's research offers no insight into how national perceptions and objective conditions are related. That link is provided by Weatherford. Unfortunately, Weatherford provides no evidence regarding the way people perceive their state's condition. He shows that the local condition matters in and of itself but provides no clue as to how the local context relates to voting decisions. As discussed below, there are at least three potential explanations, one of which does not require any recognition of state or local economic conditions on the part of the voter.

Consequently, the next step is to apply Weatherford's technique to a dataset with a broader range of measures of economic perceptions. This requires at least three criteria. First, the use of individual level data measuring attitudes towards the economic condition of the state. Combining this with measures of other economic judgment allows inferences concerning the weights attached to each. In addition, aggregate data are necessary to measure the impact of the actual economic condition on the

various economic attitudes under examination. Finally, these variables should be incorporated into an estimation procedure that provides estimates of the relative influence of each variable. Knowing, for instance, that there are multiple economic spheres is interesting, but at this point we are also interested in understanding how people combine these into a one vote decision. That can be accomplished by using a procedure that provides estimates of the weights attached to each economic variable.

No single dataset can meet every criterion listed above with the primary problem being the lack of items tapping the potential economic areas. To compensate for this problem there are a total of four datasets utilized in this research.

The first is a 1992 survey conducted by the Bureau of Economic and Business Research (BEBR) of the University of Florida. The universe is all adult residents of the state of Florida and the survey was conducted during November of 1992 (N=529). The survey method was computer assisted telephone calling using randomly selected telephone numbers. The survey, unfortunately, has some problematic biases. Looking first at the demographic profile of the state we see that it overrepresents women with 57% of the respondents being female compared to 52% of the state's adult population. Blacks were well represented, comprising 10% of the sample and 10% of the adult population. People over 65, however, made up only 19% of the sample and are 24% of the population over age eighteen. Finally, the

state of Florida was carried by George Bush in the 1992 election with 41% of the vote. But the survey respondents voted for Bush at a rate of 35% and actually gave Bill Clinton a slight electoral advantage. The overestimation of Clinton's support is partially due to over-representing women. Because the elderly tended to support Clinton, the under-representation of people over 65 should normally decrease Clinton's support. However, being a smaller portion of the sample suggests that the over-sampling of women poses the larger problem. The bias in Clinton support may also be due to misrepresentation of other groups not detailed here.¹

A second problem with the BEBR data is that the dataset does not adequately measure group economic evaluations. There is a single item included in the survey that asks respondents how they feel people similar to themselves have fared over the last year. The problem is that it is only a single item and so it cannot be utilized by CFA. Confirmatory factor analysis requires at least two items to represent each potential factor. This requirement is based upon the logic that CFA models utilize. Confirmatory factor analysis begins with the fact that the variable of interest, the factor we wish to document or explain, is unobserved. We can only observe it

¹The BEBR also conducted a survey in October of 1992. Because it is possible that the respondents over-reported their Clinton vote during November because of Clinton's victory the October data were examined to determine whether or not it had the same bias toward Clinton. The October data yield similar problems with Bush receiving 39% of the intended vote and Clinton receiving 44%.

indirectly. This is done by examining covariances among variables that can be measured, i.e. answers to a survey. If only one item is available then no covariance exists. Put differently, it means that the single item is assumed to perfectly represent the factor being examined. As chapter 3 describes in more detail, this assumption is virtually impossible to make, and so the item tapping group economic evaluations must be discarded. As discussed below, the same is true for items representing state economic judgment with two other datasets.

Despite its problems, the BEBR survey has one overriding advantage; it is the only dataset to contain questions measuring state economic evaluations. Personal economic conditions and national economic assessments are each covered in the BEBR data as well as the other three datasets. But attitudes concerning the condition of the economy in the state of Florida are available only within this single dataset. In addition, the size and diversity of Florida, as well as the amount of campaign attention it received make it an excellent choice for a single state study. However, the overreporting of Clinton support along with the lack of one economic sphere must be taken into account when interpreting the results. For this reason the analysis will begin with the BEBR data but then move on to other data. The data sets that will be examined are the 1984, 1988, and 1992 American National Election Studies (NES).

The NES surveys are face to face, generally lasting an hour, and were conducted as a panel with one interview prior to the election and the other following the election. The 1984 data offer items measuring personal, group, and national economic perceptions while the other two include personal and national judgments (with one item tapping state economic assessments) but exclude group perceptions. However, these surveys are nationwide and have been generally found to be representative of the electorate. Like the BEBR data these surveys assess vote choice after the election but appear to suffer less from overreporting problems.

The specific economic variables available for each survey are presented in Table 2-1. They are also described more fully in Appendix B. For the 1992 BEBR data the selection of variables was limited by the survey. All possible economic variables tapping either the personal, state, or national economic spheres were utilized. With the three NES datasets there is some discretion available in terms of the variables that can be selected. For the purposes of creating similar models for all three elections only those questions that were asked identically in each of the three surveys were included. A measure of state economic judgments is available in 1988 and 1992 but they are not included because there is only one question in each survey. Group economic assessments were asked only in 1984 and so need not be compatible with the other datasets.

Table 2-1.
Economic Variables utilized by Dataset.

Variable	Questions Used	Coding
BEER Dataset		
Vote Choice		1= All other than George Bush, 2= George Bush
National Economic Conditions	1-Next 12 month business conditions 2-Next 5yr business Conditions 3-Next 12 month unemployment 4-Next 5yr unemployment	All are coded 1 to 3 with 3 representing the best economic assessment.
State Economic Conditions	1-Next 12 months financial condition of Florida 2- Next 5yr financial condition of Florida	All are coded 1 to 3 with 3 representing the best economic assessment.
Current Personal Financial Condition	How has R's personal economic condition changed over the past year?	1= Worse, 2= Same, 3= Better.
Future Personal Financial Condition	How does R expect to do financially next year?	1=Worse, 2=Same, 3= Better.
County Unemployment	(Source: <u>Florida Labor Market Trends</u> , December, 1992)	Actual percentage change from in county unemployment from 11/91 to 11/92.
1984, 1988, 1992 ANES Datasets		
Vote Choice		1= All other than George Bush or Ronald Reagan, 2= George Bush or Ronald Reagan
National Economic Conditions	1-Inflation over the past year, 2-Unemployment over the past year, 3-The national economy over the past year, 4-How have the policies of the federal govt affected the economy?	All items have a range of 1-5 with 1= Much worse and 5= Much better.
Group Economic Conditions (1984 only)	1-Group economic condition change over the past year, 2-Group economic change versus the cost of living, 3-The effect of federal policies upon the group's economic condition.	Range is 1-5 with 1=Much Worse and 5= Much Better.
Personal Financial Conditions	1-Personal condition today versus one year ago, 2-Income versus the cost of living over the past year, 3-The effect of federal policies upon R's economic condition.	Range is 1-5 with 1=Much Worse and 5= Much Better.
Future National Economic Conditions	How does R think the national economy will do over the next 12 months.	Range is 1-5 with 1 = Much Worse and 5= Much Better.
Future Personal Financial Conditions	How does R think their personal financial conditions will be during the next 12 months?	Range is 1-5 with 1 = Much Worse and 5= Much Better.
State Unemployment	(Source: <u>Statistical Abstract of the United States</u> , Various years)	Measured as percentage change in state-wide unemployment for year prior to the election.

Note: All economic scales created in later chapters use these variables. All the content of the scales, however, does not necessarily reflect the various economic spheres as represented here. All later scales are based upon Confirmatory Factor Analysis scores.

Table 2-2 provides the list of control variables for both the BEBR and the NES datasets. The controls can easily be incorporated into multivariate studies such as 2SLS and Logistic regression. The control variables for all the analyses described below include partisanship, occupation, income, social class, gender, race, age, and region. The controls are largely the same for all of the datasets.

Tables 2-1 and 2-2 also present the contextual variables used in this research. Following Mutz's lead I present a variable related to political discussion. While Mutz's discussion variable is more directly related to economic matters, the one used here should tap some of the same relationships. More importantly, two interaction terms are built from the discussion term and from the aggregate measure of state unemployment. These interaction terms test whether talking more or less with friends within a particular economic context affects economic perceptions. Logically, if political discussion is related to the amount of negative/positive feedback one receives from interpersonal contact, then there should be an interaction between the condition of the state and the amount of discussion one engages in. To help determine whether this interaction is related to higher or lower levels of discussion two interaction variables are created. The first codes respondents two if they engaged in no discussion and one otherwise. This is multiplied by the percentage change in state employment. The other codes respondents one if they engage in discussion four or more days each

Table 2-2.
Political Variables utilized by Dataset.

Variable	Questions Used	Coding
BEER Dataset		
Party Identification		Range is 1 to 5 with 1= Strong Democrat and 5 = Strong Republican
Education	Highest level of Formal Schooling	Range is 1-5 with 1= 8th grade or less , 2= High School Graduate, 3= Some College, 4= College Graduate, 5= any Graduate Schooling
Race		1=White, 2=Nonwhite
Family Income		Coded as income categories. See Appendix B.
Gender		1=Male, 2= Female
Age		Actual Age
1984, 1988, 1992 ANES Datasets		
Education	Highest level of Formal Schooling	Range is 1-10 as with 1= 8th grade or less and 10 = Advanced degree.
Occupation	Current or Most recent Job	From Abramson, Aldrich, and Rohde (1990) where higher numbers = higher prestige occupations
Social Class	Self Placed Social Class	Coded 1-8 with 1= lower class and 8= upper class.
Campaign Interest and Attention to the Media	1-Attention to TV coverage of campaign, 2-Attention to Newspaper coverage of campaign, 3- Personal interest in the campaign.	Range for each item is 1-5 with 5 indicating high levels of attention or interest.
Discuss Politics with Friends	How many days per week do you discuss politics with friends?	Coded as actual number of days.
Low Contextual Effect	1-State Unemployment 2-Political Discussion	A multiplicative term created by computing the product of both items for those who did not discuss politics at all.
High Contextual Effect	1-State Unemployment 2-Political Discussion	A multiplicative term created by computing the product of both items for those who discussed politics at least four days each week.
Party Identification		Range is 1-7 with 1= Strong Democrat and 7= Strong Republican.
Family Income		Coded as income categories. See Appendix B.
Age		Coded as actual Age
Race		1=White, 2=Nonwhite
Gender		1=Male, 2= Female
Age		Actual Age
South		1=Nonsouth, 2= South

Note: Education and Campaign Interest Z-scores are computed to determine the distance of an individual from the mean. The Z-score was then used to create a simple additive scale for the Campaign Interest Items. For both Education and Interest, the samples are divided in quartiles for analysis in Chapter 4.

week, one if otherwise. This is also multiplied by state employment. If the relationship between discussion and the local context is due to high levels of discussion the second item should detect that. The other item should determine whether it is the lack of contact that works with the local conditions to affect vote decisions.

Finally, the selection of respondents deserves some attention. This research analyzes only responses from people who claim to have voted. This excludes many people who were willing to offer evaluations concerning the condition of the economy at each level but did not vote. Excluding nonvoters should refine the models present so that they represent the cognition of voters and not simply the general public. Perhaps a more serious and more difficult concern is overreporting of the vote. Some people claim to have voted when, in fact, they have not. Unfortunately, only two datasets provide for vote validation. The 1984 and 1988 NES validated data will be used to cross-check the results provided in the main text of chapter 3. If the results are comparable then we can be fairly confident that the other analyses are not biased by the inclusion of over-reported voters. Such has been the general conclusion of past research (Sigelman, 1982; Silver, Anderson, Abramson, 1986). The results are presented in Appendix A.

As noted above Chapter 3 utilizes CFA and the Barton-Parson's statistic. Chapter 4 employs a combination of Logistic Regression (Logit) and Two-Stage Least Squares regression (2SLS). To examine the various

coefficients of interest first a single logit equation is estimated with vote choice as the dependent variable and including all of the economic and control variables. Accordingly, the first equation analyzed is:

$$(2-1) \text{ (Log Odds)Vote Choice} = \alpha + \beta_1\text{Econ Future} + \beta_2\text{National Econ} \\ + \beta_3\text{State Econ} + \beta_4\text{Group Econ} + \beta_5\text{Personal Econ} + \beta_7\text{Party ID} \\ + \beta_8\text{Unemployment} + \beta_9\text{Interaction} \dots \beta_x$$

To complete the analyses a series of two-stage regressions are performed. Two-stage regression provides a singular advantage over ordinary least squares; it controls for non-recursive effects between the variables examined. That is, 2SLS makes it possible to measure the influence of one variable on a second while controlling for reciprocal effects. The reciprocal effects are controlled for by first estimating values of one list of variables (endogenous) using a collection of predictor variables (instruments). Once the first stage is completed, the second stage involves performing ordinary least squares regressions while substituting the predicted values from the first stage. Put simply, the instruments are used to predict values of a set of dependent variables which then replace the original values as regressors in the subsequent analyses. Vote choice and each of the economic variables are estimated as jointly dependent, or endogenous. These variables are listed in Table 2-1. The instrumental variables, those used to obtain the predicted values of the endogenous variables, are listed in Table 2-2.

Having decided upon which variables to treat as endogenous and which as instrumental, the task now turns to building the equations to

estimate. MacKuen, Erikson, and Stimson (1992) suggest that prospective evaluations have the most direct influence upon vote choice. Accordingly prospective evaluations are modeled as being causally prior to vote choice and being composed of retrospective evaluations.² This provides the following equation:

$$(2-2) \text{ Prospective Evaluations} = \alpha + \beta_1 \text{National Econ} + \beta_2 \text{State Econ} + \beta_3 \text{Group Econ} + \beta_4 \text{Personal Econ} + \beta_5 \text{Vote Choice} + \beta_6 \text{Party ID.}$$

Note that vote choice is included in the model to control for the fact that expectations concerning the future of the economy are shaped, in part, by the political commitments that a person has made (Kinder et al., 1989).

The next equations are also derived from past research. In most past research national economic perceptions are utilized in a manner analogous to the prospective evaluations in Equation 2-2. That is, national judgments are hypothesized to be directly related to vote choice. In addition national level perceptions are expected to influence and be influenced by party identification (Fiorina, 1978, 1981) as well as vote choice (Kinder, Adams, and Gronke 1989). Thus party identification and vote choice are included as independent variables in the national economic equation presented below. No other controls are offered because they are utilized as controls for the

²It is very likely that several of the control variables would influence prospective evaluations directly. However, the demands of model identification dictate that there is a limit to the number of instrumental variables that can be used in more than one equation. This means that one cannot predict both prospective and retrospective evaluations with the same independent variables and still regress them on each other.

remaining economic spheres thereby indirectly taking them into account.

Equation 3 summarizes these descriptions:

$$(2-3) \text{ National Econ} = \alpha + \beta_1 \text{State Econ} + \beta_2 \text{Group Econ} + \beta_3 \text{Personal Econ} + \beta_4 \text{Vote Choice} + \beta_5 \text{Party ID.}$$

The equations for group and personal evaluations are more straightforward. Group judgments are logically built upon both personal economic evaluations and personal characteristics. Neither Conover (1985) nor Kinder et al. (1989) suggest that group evaluations use personal economic judgments as a source of information. However, logic suggests that people will extrapolate from themselves to their group. Furthermore, psychological theories such as the availability heuristic provide a basis for expecting people to use personal conditions to help them make group level judgments. Ultimately the strongest rationale for modeling group evaluations as a partial function of personal judgments is to determine whether or not the two are related. Finally, since most demographic controls have some relation to social groups they are included as independent variables in Equation 2-4.

$$(2-4) \text{ Group Econ} = \alpha + \beta_1 \text{Personal Econ} + \beta_2 \text{Party ID} + \beta_3 \text{Social Class} + \beta_4 \text{Occupation} + \beta_5 \text{Income} + \beta_6 \text{Age} + \beta_7 \text{Race} + \beta_8 \text{Gender} + \beta_9 \text{South.}$$

Personal economic conditions are clearly related to the personal characteristics of an individual. Income, occupation, race, and gender each significantly influence the overall condition of one's financial situation. It is not surprising, then, that all of the demographic variables are utilized as

independent variables in the personal perceptions equation. In addition to these are several other variables. The local context, whether defined as a labor market area or the state of residence, can directly influence a person's perception of their own condition (Weatherford, 1983a). Similarly, discussing economics and politics with friends may also influence economic perceptions. Mutz tests this directly, and finds no significant relationship between discussion about the economy and personal economic perceptions (1992). However, her theoretical arguments predict that such a relationship should exist. Thus, discussion and the interaction terms created from it are included in Equation 5 along with the demographic variables.

$$(2-5) \text{ Personal Econ} = \alpha + \beta_1 \text{Unemployment} + \beta_2 \text{Discussion} + \beta_3 \text{High Interaction} + \beta_4 \text{Low Interaction} + \beta_5 \text{Party ID} + \beta_6 \text{Social Class} + \beta_7 \text{Occupation} + \beta_8 \text{Income} + \beta_9 \text{Age} + \beta_{10} \text{Race} + \beta_{11} \text{Gender} + \beta_{11} \text{South.}$$

Past research, however, offers less evidence regarding what attitudes and characteristics influence state economic evaluations. Here state economic perceptions are treated as a function of both personal economic experiences and the local context. This makes it possible to determine whether people generalize from their own condition to a broader level. Just as with national and group judgments it is possible that personal conditions influence the way people regard the state's economic strength. In addition, Mutz does find a significant, if inconsistent, relationship between levels of discussion and unemployment as a state problem (1992, Table 2). Mutz's survey asked respondents whether unemployment was a problem for their

state and as well as whether it was a problem for themselves or their family. She found that the amount of discussion had a significant influence on unemployment at the state level, though not at the personal level. Accordingly, the variables intended to tap the local context are also included in the state economic equation.

$$(2-6) \text{ State Econ} = \alpha + \beta_1 \text{Personal Econ} + \beta_2 \text{Unemployment} + \beta_3 \text{Discussion} + \beta_4 \text{High Interaction} + \beta_5 \text{Low Interaction} + \beta_6 \text{Party ID}.$$

In all, the equations described above conform to much of the economic voting literature. Personal economic perceptions are found to be the most basic and are thought to be more immediate in the minds of the voters. Accordingly, it is used as an independent variable for each of the other economic spheres. At the reverse end, prospective economic perceptions are hypothesized to be the most proximate economic determinant of vote choice even when controlling for personal, group, state, or national economic perceptions or conditions (MacKuen, Erikson, and Stimson 1992).³ Therefore these sociotropic measures are modeled as the most direct link to vote choice. However, Equation 2-1 does test to determine if national, state, group, or personal judgments affect vote choice

³As shown in Table 2-1 there are two items available for measuring prospective economic evaluations. These cover both personal and national evaluations. Since there are just the two items no effort was made to distinguish between the potential types of prospective judgments using these items. They are used together to represent general prospective evaluations.

in the presence of prospective evaluations. The question of a direct link between state economic assessments and vote choice is especially important given the lack of any individual level explanation for the relationship between vote choice and objective economic conditions. Together, Equations 2-1 and 2-6 should determine whether the linkage is direct, indirect, or nonexistent at the individual level.

Before describing the remaining analyses one problem must be addressed. As noted above no single dataset contains all of the variables listed in Equations 2-1 to 2-6. As a result, many of the equations can only be approximated with the available data. Chapter 4 details the specific equations analyzed for various datasets along with the changes made to the basic equations.

The results of the analysis are presented in Chapter 4. But as mentioned above, defining the linkages between each economic sphere does not give any indication as to what types of people utilize each type of economic model. Chapter 4 will also make some inroads into answering whether the type of economic voting depends upon the type of voter by examining the correlates of sophistication.

Education, campaign interest, and media attention are utilized here to split the survey samples roughly in half. Education represents the availability of resources that can, if wished, be devoted to political information gathering. The availability of cognitive resources can alter both

the amount of information a person possess and the way in which they process that information. Interest and media usage are used here as an indicator for the amount of resources actually devoted to the campaign. By scaling interest and media usage and then splitting the sample into subsamples based on attention to the campaign and education it is possible to see if the decision making process is altered by the amount of resources available for or devoted to the decision making process. It is hypothesized that higher levels of resources will result in greater utilization of more complex and abstract information. Those in the lower subsample are hypothesized to use fewer factors in their decision making process and also to choose more tangible information. Finally, I should note that halving the sample has two results. First, it conserves cases to in order to maintain a large sample size to conduct the necessary tests. Second, it is a conservative test of the hypotheses because it does not select only the extreme cases for examination.

In summary, Chapter 3 examines the underlying structure of economic attitudes. This first goal is determine whether economic judgments constrained either between or within economic spheres. Second, the demographic correlates of constraint are examined to provide the foundation for understanding differing types of voters. Chapter 4 is devoted to estimating the five equations presented above and addresses three questions. First, whether the linkage between state economic conditions

and vote choice is direct or indirect; second, whether state economic perceptions are related to the objective conditions within the states, and third, whether increased interpersonal contact also increases the effect of the objective context. Chapter 4 then expands upon this by splitting the sample into halves based on the political interest of the respondent. This will help determine if the cognitive resources devoted to the campaign affect either the types of information used in decision making, the variety of information utilized, or both.

CHAPTER 3 CONSTRAINT AND THE STRUCTURE OF ECONOMIC ATTITUDES

Do the structures of economic evaluations vary based upon personal characteristics? This is the basic question addressed in this chapter. Before turning to it, however, two ancillary questions must be addressed. First, what characteristics are thought to be related to the way people structure economic evaluations or judgments? Second, how does one measure the structure of economic evaluations?

The first question has already been addressed by much of the literature on other forms of cognitive constraint (Barton and Parson, 1977; Converse, 1964; Stimson, 1975) as well as by research on economic voting (MacKuen and Mouw, 1993, Weatherford, 1983b). These lines of research suggest two personal characteristics that are related to either constraint or economic judgments. The first is education. The amount of formal schooling, while not necessarily related to intelligence, appears to be related to the ability to handle the abstract ideas and concepts that form the basis for many political attitudes. Described in terms of cognitive constraint, education is understood to be an indicator of the amount of resources available to the person for devotion to a particular evaluative task. This suggests, and previous research has found, that education is positively

related to constraint. The more educated a person is the more consistent his or her attitudes are expected to be across a series of response items. For example, Stimson (1975) shows that response consistency increases with higher levels of education.

In addition, attention to the media, interest in politics, and interest in a campaign have been suggested to alter the calculus of economic voting. Most notably, Weatherford (1983b) demonstrates that people who pay more attention to the media are more likely to emphasize national or sociotropic judgments when casting their ballot. Placed within the cognitive constraint model described above, attention and interest can each be viewed as indicators of the amount of political information the individual chooses to collect and therefore also indicates the amount of information available to the person when expressing his or her evaluation in the form of a vote choice decision or a response on a survey. Weatherford suggests that differences in the supply of information and the reliability of that supply cause people to weight their economic judgments differently (1983b). For example, Weatherford argues that a person with low levels of attention to the media will lack the necessary information to evaluate the condition of the national economy accurately. Personal economic judgments are readily available to all individuals, even if their salience is low. But specific information regarding the condition of the nation is not readily available to the mass public. Instead, it must be actively gathered through the media,

as Weatherford suggests, or potentially through discussion with friends and associates (Mutz, 1992). Accordingly, a person with low levels of attention to the media would, under Weatherford's logic, rely more heavily upon personal economic evaluations. Thus, the amount of information possessed by the individual is hypothesized to be positively related to the emphasis placed upon national economic evaluations in voting decisions.

In theory, the distinction between available resources (education) and allocated resources (interest/attention) implies at least two dimensions to cognition and politics. In the first case I seek to make a rough estimate of the total pool of resources available to a person. In the second, the idea is to estimate the portion of that pool actually devoted to the study or understanding of politics. Accordingly, both education and media attention and interest are utilized in this research. To accomplish this, the sample for each dataset is divided into rough quarters based upon individual scores for education as well as for a scale created to measure interest in the campaign and attention to the media during the campaign (for questions and wordings see Tables 2-1 and 2-2 and Appendix B).¹

The items comprising the campaign attention scale begin with different numbers of response categories and this poses a problem for scale construction. The question regarding interest in the campaign has three

¹Note that the BEBR data contain no variables measuring either interest attention to the campaign. Only education is used to break the BEBR data into subsamples.

response categories coded one, three, and five. The questions concerning media attention are also coded one to five, but with five response categories. The difference in response categories results in the first question having more variance than the remaining two questions. If I were to create a single additive scale from these three variables the interest question would bias the scale because of the additional variance it represents. The easiest way to avoid the problem is to recode the response of "two" and "four" for media attention. However, exactly how should they be coded? Should those responding "two" be lumped with those responding "three" or "one?" Because there is no clear basis for making that decision standardized scores provide an alternative. Standardized scores code responses as deviations from the mean; each person receives a score equivalent to their standard deviation from the overall mean. This has the effect of maintaining the values of different responses while ensuring that all the questions included in the scale have the same weight. Arguments supporting this method are presented by Levine (1973).

The above section answers the first question posed at the beginning of the chapter: which characteristics are related to the structuring of economic judgments? But a more complex question remains: how can one document and evaluate both the existence and constraint of economic evaluations? As is normal for social science research there are several potential methods for estimating the constraint of political attitudes. This

research uses two methodologies drawn from past studies of political sophistication.

The simplest is the Barton-Parsons statistic (BP) which is intended to measure intra-sphere constraint or constraint across items within the same economic sphere (Barton and Parsons, 1977). However, the BP statistic cannot be computed until we have established the questions that will constitute the measures for each economic sphere. The Barton-Parsons test requires that the responses to several different questions be compared. Until the validity of the questions chosen to represent each economic sphere is established, the BP test is meaningless. Therefore, the first major section of this chapter will focus on establishing the economic spheres and the degree of inter-sphere constraint.

Introduction to Confirmatory Factor Analysis

Chapter 2 provides a general description of the two methodologies utilized in this research. A more detailed discussion is warranted here. This section has two basic goals. The first is to provide a mechanism for understanding the extent to which the electorate distinguishes between the economic spheres that political scientists have identified. The second is to estimate the effect of cognitive resources on those spheres. Fortunately, one methodology serves both purposes.

Confirmatory factor analysis (CFA), as the name suggests, allows the investigator to posit factor analytic models *a priori* and then test their fit.

This provides the researcher with great flexibility. Because of that flexibility extra attention must be given to the process of model building in order to make the result both more understandable and more replicable.

When building a CFA model and its associated testing strategy the researcher first must address the issue of theory versus data driven modeling. Ideally, science rests upon theory. The scientist takes past evidence, examines it for patterns, builds a hypothesis from these patterns, and tests the hypothesis. Confirmatory factor analysis is well suited to such deductive reasoning. One can take specific questions or response items, hypothesize a specific number of factors and how the questions load onto the factors, and then determine the fit of the data to the hypothesized model. While appealing in its simplicity such modeling is questionable. The primary problem is that this kind of research does little to refute competing models. Are there other factors or combinations of factors onto which these same variables can load? Perhaps more importantly, are there simpler, more parsimonious, models that fit as well or nearly as well? Answering these questions requires a more inductive, or data driven, modeling procedure. The problem here is that one must avoid letting theoretical concerns become secondary to finding the best, or most statistically significant, model.

Drawing a line between these two somewhat contradictory goals is possible. One solution, perhaps the most common in the literature, is to incorporate the best parts of each style of research. This is accomplished by

testing several competing models to determine their relative explanatory power and overall fit. These models should be derived from theory and past research that indicates the potential ways in which factors might be structured. Theory, in this case, provides not only logic to help us understand and interpret the results, but serves a practical function of limiting the number of models that must be examined. When testing latent or factor structures, there are at least $N(N-1)$ potential models (where N represents the maximum number of hypothesized factors) that can be created. These naturally range from a one factor model to a N factor model.

Given the tension between inductive and deductive reasoning this research is conducted using the combined approach outlined above. Theoretical concerns are used to select the most logical potential models. The models decided upon are then contrasted to determine which one fits the sample best. The specific models estimated are described in detail below. First it is necessary to discuss the modeling itself.

The basic premise of factor analytic models is that the variables of interest are generally not directly observable. We cannot measure an attitude or cognitive structure itself. But we can measure indicators of those attitudes such as overt behavior or responses to survey items (observed variables). The covariance between these responses can demonstrate the existence of the underlying concept (latent variables). For the purposes of this research variables are described as either observed or latent. However,

there is a second way to characterize variables. In CFA, we consider latent variables to be the cause of the responses or observed variables. This means that we may also refer to most latent variables as *exogenous* and most observed variables as *endogenous*. The exceptions to this simple rule are second order factor analyses in which one latent variable is thought to be causally related to another latent variable making the latter an endogenous variable. This research does not offer an analysis of this type but it is important to note that such models are possible. It is also important to remember that in CFA, latent variables are defined as causing the observed variable and not the reverse. Documenting these types of relationships is at the heart of covariance structure analysis and hence confirmatory factor analysis (Bryne, 1989 and 1994; Hayduk, 1987; Long 1983a and 1983b).

Within that broad description there once again lies great flexibility. A basic CFA model posits little or no covariation between the latent variables, and no covariance between the observed variables loading on one factor and the observed variables loading on another. Put more simply, there is assumed to be little or no correlation between the factors and therefore no correlation between observed variables "caused" by the different factors. This assumption is the "default" setting for all CFA models. That is, unless specified otherwise, the model assumes all covariances between observed variables loading on one latent variable and the other latent variables are

zero. Realistically this is unlikely to be true. Not only will observed variables loading on one factor often correlate with observed variables loading on a different factor, but they also can load onto more than one factor (for an example of this see Kinder, Adams, and Gronke, 1989). In addition, analyses of related factors will usually find that the factors themselves covary. Taken as a whole these concerns mean that the researcher is left much discretion in the amount of covariance to allow and the constraints placed upon the models and their individual components.

Constraint is both a theoretical and mathematical concern. As already stated, most potential correlations in a model are constrained to be zero. However, if there is theoretical justification the investigator can free parameters to be estimated and thus allow certain covariances between both latent and observed variables. In terms of theory, freeing a constraint means that the researcher is arguing that some form of linkage exists between two observed or latent variables. This should normally be, but often is not, a theoretical decision. If the researcher believes two factors are not, or theoretically should not be, related he or she can keep the default setting and leave them constrained to be independent. Mathematically this translates into fixing the covariance of two variables to zero. Given the great deal of error found in survey research such constraints have a nearly universal effect of decreasing the fit of the model since they impose more stringent standards on the data and its error. The decreased fit often leads

researchers to conduct a more "exploratory" usage of confirmatory models by freeing constraints in order to achieve a better fit (Kinder, Adams, and Gronke, 1987).

Post-hoc model fitting is an issue in most confirmatory analyses. "Post-hoc" can be simply defined as using the results of prior estimations to improve the fit of a model. It is a data driven method wherein the researcher take the results of a theoretically specified model and uses them to pinpoint places of poor fit. This might entail dropping some variables from consideration, freeing constraints between variables, specifying new latent structures, or any similar procedure. Post-hoc fitting is not inherently flawed or even problematic. In fact, it is useful in the same way as standard exploratory factor analysis. It allows the researcher to find the best fit and present it for review. This can be especially helpful when the literature has not fully developed the topic under scrutiny. However, it does entail problems. First, one must be fully cognizant of the fact that the results are no longer theory driven and thus the results must be carefully placed back into the context of the literature they address. Second, it is nearly impossible to precisely replicate models that have been fitted post-hoc. The number of possible combinations of factors has already been noted and larger still are the combinations of constraints that can be placed on both the latent and observed variables. Short of presenting the actual programming for the analyses, true replication is nearly impossible.

Within this research I have chosen to avoid all post-hoc modeling. This decision is predicated on the above discussion. First, there is a fairly substantial literature concerning economic voting which provides strong evidence supporting the theoretical relationships between most of the economic spheres being studied. The exception is that of state economic evaluations, and even they can be incorporated into the literature. Second, this makes the results both more generalizable and more replicable. Others should be able to duplicate the results and therefore apply the same techniques to other data. Given that the data used here have so many limitations, this is a necessary condition for supporting future research. In short, this research will rely only upon models defensible on the basis of past research and leave obtaining models with the best possible fit for later research.

Having set the limits for the efforts that will be made to provide a "best" fitting model there are two secondary issues that need to be addressed. The first regards a limitation of the data currently available. Chapter 2 noted that in several instances a variable of theoretical interest has to be dropped because of modeling problems. Specifically, a measure of group economic evaluations in the BEBR data and a measure of state economic evaluations in both the 1988 and 1992 NES data cannot be utilized in these analyses even though they are available in the datasets used here. The reason bears some explanation.

As noted above, CFA assumes that an underlying factor, or latent variable, causally affects an observed variable. By examining several observed variables, confirmatory factor analysis is able to determine if there is statistically significant covariance or correlation between the variables. That is, do two or more variables covary to such an extent that we can argue there is a real (statistically significant) concept that is affecting all of the variables? If the covariance is high, then the model will produce a significant latent structure. Clearly we cannot ask such a question when there is only one variable to measure a given factor. In such a case, the factor would represent not the covariance between several potentially related variables but instead would represent the variance of the single variable present. In short, we would be assuming that the single available variable measures, without error, the factor structure under scrutiny. This is an unreasonable assumption.

At least three strategies exist for approaching this problem. The simplest is to continue to use the variable. If this is done and the researcher attempts to estimate the factor that variable represents, the fit of that model will normally be very poor. If the model is derived according to theory and not contrasted to other models, it may still be possible to find a good fit with enough relaxed constraints. However, such a model will usually fit worse than a competing or alternative model.

One simple alternative model can be created by using a second strategy for handling single item variables. The competing model can include the variable in question as loading on a similar or related factor. For instance, I could model the group variable as loading with items representing the personal factor in the BEBR data or the state perceptions variable as loading on the national factor in NES data. In both cases this makes it possible to achieve an acceptable fit but at the cost of theoretical insight. If a variable representing one factor is included as loading on a different factor then the researcher is arguing that there are not two separate factors but instead just one. Such an argument can be legitimately made only when adequate measures of both factors are present. Without representation of both potential latent structures, the hypothesis that a second factor exists cannot be rejected and hence the model implying only one latent factor cannot be accepted. In addition, the principle of parsimony would suggest that additional variable should be dropped because it adds no insight or explanatory power.

The other option is to exclude the items in question. Exclusion sacrifices the scope of the results. No longer can those data be used to draw conclusions regarding the existence or lack of existence of certain factors. The gain, however, is theoretical validity.

This research adopts both the second and third methods. I have already noted the group and state economic items found respectively in the

BEER and 1988 and 1992 NES data are excluded. Group and state evaluations, while correlated with personal and national economic judgments, are completely distinct. They have a theoretical distinction in that they are purported to be judgements of an object very different from personal and national conditions. That is, the condition of one's group and one's family may be related but they are conceptually and measurably distinct. The same is true for the economic conditions of the various states versus the nation as a whole.

Also included in the analyses are items representing prospective evaluations. It is unclear the extent to which evaluations of the current condition of one's family or the nation are distinct from expectations of future conditions. Certainly some difference exists, especially in instances when consumer confidence improves owing to an event such as an election. However, they are not as distinct as group and state evaluations. MacKuen, Erikson, and Stimson show that business expectations are heavily influenced by retrospective business evaluations (1992, 604). The extent of this influence suggests that while prospective judgments may be most proximate to vote choice, retrospective evaluations are an integral part of the decision making process. Furthermore, both of the items tapping prospective evaluations are clearly worded with the intention of also tapping personal and national economic judgments. Accordingly, prospective evaluations are tested in two ways. First, each item is included as loading on the economic

sphere to which it is most related. This means that personal prospective evaluations are tested in concert with all other personal evaluations and the same with national judgments. Second, the two prospective items are tested together to determine whether they represent a separate factor. Because only one prospective item is available for each economic sphere no effort is made to interpret whether there are two or more prospective dimensions. Rather this research focuses on the existence of one combined dimension.

The preceding discussion outlines how the analyses are conducted in this portion of the chapter. Theory is used to define competing models which are then tested against each other. The various models represent the ways in which people could structure their economic evaluations. The models that can be built for each dataset are dependent upon the available data and so are addressed separately for each set of analyses. However, before addressing the models and their estimation, one final topic regarding confirmatory factor analysis has to be addressed.

Determining how well confirmatory factor analytic models fit the data can be a daunting task. For example, SAS's procedure CALIS provides nearly twenty global goodness of fit assessments (SAS Institute, 1989).²

²All confirmatory factor analyses presented in this paper are computed using SAS's CALIS procedure. For most disciplines the most commonly used program is LISREL and so within the literature confirmatory analyses are often referred to a "LISREL" analyses. In reality LISREL is a program and not a technique. CALIS has the capability of emulating LISREL and several

Understanding the assessment of fit for a confirmatory analysis is something more akin to an art than a science. Tanaka (1993) provides an excellent conceptual foundation for categorizing measures of goodness of fit.

Tanaka describes six potential dimensions for rating a fit assessment. Not all of these are of concern at this point; only four will be mentioned here. These include the relationship of fit to sample size, whether the assessment of fit is absolute or relative, whether the assessment of fit favors more parsimonious models, and whether the measure has a normed distribution.

The earliest measure of the fit for confirmatory models was based upon the chi-square statistic. Quickly, however, it was noted that the chi-square is heavily dependent upon the size of the sample. Large samples have large chi-square values and vice versa. Thus, with sufficiently large samples even minor relationships will be detected and lead to a rejection of the null hypothesis (Joreskog, 1969). Some, including Joreskog, suggest including the degrees of freedom to help interpret the relative value of the chi-square. The simplest way to accomplish this is to divide the chi-square by the degrees of freedom and examine the ratio (Wheaton et al., 1977).

Unfortunately, researchers cannot agree upon a ratio that indicates significance (Hayduk, 1987, 168). More problematic still is the fact that the degrees of freedom is based upon the number of observed variables and

other programming languages. I use the "lineqs" option to emulate the EQS program by Bentler. Most of the specific programming techniques used in this research are not detailed but are described by Bryne (1994, especially chapter 3).

constraints and thus does nothing to alter the fact that the chi-square still changes in direct proportion to the size of the sample (Hoetler, 1983).

Models based upon large sample sizes may never reach an acceptable chi-square/degree of freedom ratio while models with small sizes may obtain it easily. Based upon this debate it is clear that at least one measure of goodness of fit must not be based upon the sample size.

The second concern addressed here relates to whether the fit assessment is global or relative. Again the chi-square provides a good example. The significance of the model, using a chi-square statistic, is based upon comparing the difference between the model chi-square and a null model chi-square. The difference has a chi-square distribution with the accompanying difference in degrees of freedom and so can be assessed for its statistical significance. This statistic, then, can be said to be relative since it is a comparison of the hypothesized model to a null model. In this way it is like an F-statistic in regression analyses. One clear problem with this method is that the null model is computer/mathematically generated and is normally theoretically uninteresting. More specifically, the null model usually posits no relationship between the variables in the analysis while the hypothesized model posits a specific set of relationships among the variables. For example, a null model addressing several economic variables would posit that they are not related. A model that allowed the variables to be correlated would be an improvement over the null model and so would

be statistically significant. But theoretically, it would offer little insight since it says nothing about the overall fit of the hypothesized model. One consequence is that the null model can be such a poor fit to the data that even a misspecified hypothesized model will provide an "improved" fit. The improvement comes from not from the accuracy of the hypothesized model but from the inaccuracy of the null model.

On the other hand, absolute measures are more analogous to an R^2 statistic. That is, an absolute measure is not based upon a comparison to a null model but rather is a stand alone assessment of how well the hypothesized model fits the data. This has the clear advantage of being consistent across datasets and models since there is no alternative model implied by the statistic. The problem, however, is that absolute measures provide no way of determining how much better or worse a model must be before an alternative is selected (this is also true of some relative measures). Parsimony argues that explaining the most with the fewest variables is to be our goal. But how much more must a single variable explain in order to be accepted? Consider two models, A and B. If explaining variance is the goal, how much larger must model A's R^2 be in order to prove that A is better than B? There is no easily agreed upon number that proves A is superior to B even if one accepts that a larger R^2 is better. Just as with regression, structural equations can be difficult to evaluate using many of the available absolute or global measures of fit. It can, however, be answered by the chi-

square test. If models A and B are nested, a chi-square test can determine whether model A is better than model B (Hayduk, 1987). On the other hand the chi-square cannot determine the overall quality of fit for either model. Therefore, at least one measure of fit should be relative, one should be global, and one should allow for significance testing.

The third dimension, namely parsimony, has been mentioned already. It is important to note that parsimony in CFA modeling is based entirely upon the degrees of freedom used by the model. The fewer degrees of freedom used in the estimation procedure the more parsimonious the model. Of course, adding more observed variables increases the degrees of freedom which means that model parsimony is not necessarily theoretical parsimony.

Recall that constraining covariances means fixing them to a specific value, normally zero. This frees up a degree of freedom and thus makes the model more parsimonious. Constraining parameters also tends to decrease the fit of the model. Conversely, freeing a parameter generally increases the fit but decreases the degrees of freedom. So if a fit index does not take into account the degrees of freedom, models with more estimated parameters will generally fit better than those that are more highly constrained.

All statistics using the idea of parsimony utilize this logic. One common method of making a statistic favor more parsimonious models is to divide the total model's degrees of freedom by the total potential degrees of freedom and then multiply the test statistic by this ratio. The higher this ratio the more parsimonious the model and therefore the higher the resulting

statistic. For example, if the original test statistic yields a value of .90 and the model has 90 degrees of freedom out of an original 100 then the parsimonious index score is .81. Had the model used 50 degrees of freedom the parsimonious based index score would be .45. Finally, it is important not to overstate the emphasis on simplicity. Freeing one parameter costs only one degree of freedom and if it contributes enough to the fit of the model it will still cause an improvement in the fit, even when measure by indices that favor parsimony. In other words, indices that favor parsimony attempt to incorporate a form of chi-square test to determine if the improved fit is due to information provided by freeing a parameter or is simply due to the tendency for relaxed constraints to improve a model's fit. In summary, there seems to be no advantage to fit indices that are not based upon parsimony and therefore the measures of fit used here will tend to favor simpler, more constrained, models.

The final dimension is in many ways less crucial than the preceding three. The question is whether the data have a normed distribution such that it has a range between 0 and 1. Such a range is preferred by many researchers since it so closely matches statistics such as R^2 with which most researchers are already familiar. The alternatives are nonnormed indices that have no readily understood metric. For example, a chi-square 456 is meaningless by itself and may be meaningless even if the degrees of freedom are known. But a fit index of .90 where 1 represents a perfect

model is more readily understandable. For ease of interpretation reasons, at least one index of fit should be normed.

The criteria described above provide a guide that helps to discard some fit indices from consideration for use in this research. On the other hand, there are too many indices that match the qualifications detailed in the preceding discussion. In order to select the best indices from the remaining list Gerbing and Anderson provide a test and review of the most common indices (1993). They suggest three potential candidates, one global measure and two incremental fit indices, as the best available indices. The sole global measure, the McDonald normed measure of noncentrality, (McDonald, 1989; McDonald and Marsh, 1990) is chosen to fulfill that requirement (but see Tanaka, 1993, 26). Of the two incremental fit indices one is based upon the sample size and is rejected for that reason. It would make it difficult to assess the goodness of fit between models produced with different sized samples as is required below. The remaining measures, Bollen's Δ_2 (DELTA2) (Bollen, 1990) and McDonald's index, do not share that problem. In addition, both DELTA2 and McDonald's centrality index favor parsimonious models and both are normed to fall within a zero to one range with one representing a perfect fit. The primary problem with these two indices is that each lacks a measure of the significance of the increase or decrease in fit of two nested models.

It was stated above that this research would test several competing models in order to determine whether the hypothesized model comprises the

best fit. Doing that requires a way to determine the significance of the difference between two models. Nesting is the method selected here. Nesting CFA models is very similar to computing full and reduced models in standard regression. If one model can be derived as a subset of another model they are said to be nested. If two models are nested then the difference in improvement can be tested by their difference in chi-square (Hayduk, 1987, 164).

Note that this is not the same as relative versus absolute fit. A relative index compares the hypothesized model only to a null model that assumes no factors and no relationships. Such a model is of little interest to most researchers and is generated internally by the modeling procedure. Of much greater concern are models that are similar in nature and produced by the researcher. Relative indices are of no additional use when comparing two similar models. For this reason, the chi-square statistic is added to the list of indices. However, the chi-square test is used here solely for the purpose of determining which of several models is the best fit. It is not used to measure the overall fit, that is done by DELTA2 and the measure of noncentrality.

Preliminary Analyses

It is now possible to turn to the actual analyses of the data. As mentioned above, each dataset possesses measures of different combinations of economic factors. For that reason the specific latent

structures tested are discussed for each dataset individually. The fit of these models is based upon the indices and statistics cited above.

BEBR Analyses

After dropping the variable representing group economic judgments, the BEBR data address three potential factors, personal, state, and national. All of the items in the BEBR data are prospective so no need exists to distinguish between retrospective and prospective judgments. Instead, the main question addressed by the BEBR data relates to the existence of a state economic factor. Chapter 1 discussed the fact that state by state variations in vote choice may result from a variety of mechanisms. One of the indirect methods described earlier suggests that states act as contexts from which economic information is gathered. This can happen without the individual directly perceiving the condition of the state economy. The other two hypothesized models require that the electorate recognizes state economic conditions as separate from national conditions. Whether this is true can only be tested with the BEBR data. Additionally, the BEBR data contain measures of both national and personal economic evaluations. Both of these are very well established within the economic voting literature and if they are not determined to be significant it will likely cast more doubt on the data than the theory.

The goal, then, is to create a set of competing models to test. The first logical model is that only one factor represents all economic

evaluations. From this two different models composed of two factors can be hypothesized. There is no need to repeat the mixing of national and personal economic factors. So the question is where to place state evaluations. Since there is no real theoretical guidance, two separate models are developed. The first combines state and personal evaluations into one factor while the second combines state and national evaluations. Logically state evaluations should most closely resemble national judgments and thus the second model is expected to be the best of these three. The fourth model is the one of interest. This one hypothesizes three distinct economic spheres. If supported, it suggests that the electorate recognizes the state's economy is separate from the national economy.

The results are presented in Table 3-1. Both hypotheses regarding this model are supported. Clearly the first model provides a poor fit to the data on the basis of both of the over fit indices. Note however, that the chi-square divided by degrees of freedom test so often used would suggest a fairly good fitting model. This is primarily due to the relatively large number of observed variables and small number of cases. Moving onto the second and third models it is evident that state economic evaluations are more closely linked to national economic evaluations, though model 3 still provides a marginal fit ($\Delta^2 < .90$). Moving on to model 4 it is clear that this is the best fitting model (χ^2 difference of 12.6₍₂₎, $p < .01$). In addition, the model as it stands provides a slightly better than marginal fit.

Table 3-1.
Comparisons of Alternative Confirmatory Factor Analytic Models .
BEBR Data.

BEBR Data	
Model 1: 1 Factor	87.1/35 (.8514) [.8795]
Model 2: 2 Factors- Personal/State, and National	75.5/34 (.8819) [.9027]
Model 3: 2 Factors- Personal and State/National	72.0/34 (.8918) [.9106]
Model 4: 3 Factors- Personal, State, and National	59.4/32 (.9224) [.9346]

Note:

First lines of cell entries represent χ^2 /degrees of freedom.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_2 (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_c .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

It is necessary to note here that I have freed one group of parameters by allowing them to covary. Past research, such as Conover (1985) and Kinder et al. (1989), suggests that each of the economic factors are correlated with each other. Accordingly I have relaxed the constraints that there is zero covariance between the latent variables. By freeing these parameters I provide a better fitting model, but it is one that matches what previous studies have shown. In essence, there is no reason to argue that personal, state, and national economic evaluations are uncorrelated, so I have incorporated that into the above model. This is true of *all* models presented here that contain more than one latent variable. These, however, are the only constraints that have been relaxed. All other variables are assumed to be uncorrelated. No doubt relaxing those constraints could improve the fit considerably, but given that both overall fit indices are above .90 it is unnecessary.

Having ascertained the best overall fit, it is possible to examine the individual portions of that model. Table 3-2 presents the parameter estimates, or factor loadings, for the observed variables. The first thing to notice is that three of the individual parameters are not estimated and have a value of one. It is necessary in confirmatory factor analysis to fix the value of one parameter for each factor. This sets the metric for the rest of the observed variables and their loadings. If this is not done the model will be underidentified and the results suspect. For a more detailed explanation see

Table 3-2.
Parameter Estimates for Confirmatory Factor Analysis Model for BEBR Data.

Variables	Factor 1: Personal	Factor 2: State	Factor 3: National
Personal Financial Condition	1.000 (----		
Future Personal Financial Condition	1.077* (.4560)		
Family Income versus Inflation	1.085* (.4551)		
Florida's Business Over Next Five Years		1.000 (----	
Florida's Business Climate for next Year		.8452** (.1073)	
United States' Economy over next Year			1.000 (----
United States' Economy Over Next Five Years			1.240** (.2103)
National Unemployment Over the Next Year			.7016** (.1194)
National Unemployment Over Next Five Years			.8378** (.1359)
General Price Level During Next Year			.1762** (.0739)
Chi-Square/d.f = 59.4/32	$\Delta_2 = .9224$	$m_1 = .9346$	N = 202

Note: Coefficients are unstandardized. Standard Errors are in parentheses.

* = $p < .10$; ** = $p < .05$.

Hayduk (1987), especially chapter 6. At this point it is sufficient to note that the model cannot be properly estimated without fixing one observed variable per latent variable to a value of one. This means that a significance test is not conducted for these variables because both their loadings and errors are fixed. However, this is not true of the remaining variables.

Examining the remaining variables it is clear that all are significant and most are highly significant. The least important variable in the analysis is a question dealing with whether prices will rise during the next twelve months. Why this variable evidences such a weak effect is unclear. Some diagnostics provided suggest that this item is correlated with the other two factors to a greater degree than most of the other items. This is especially true of the personal economic sphere. Unemployment can be easily seen as solely a national problem if the respondent does not feel immediately fearful of job loss. However, inflation at the national level is very close to inflation at the state level as well as at the personal level. Therefore responses to this item will covary with the state and personal factors to a greater degree than the other items. Inflation is universal and is much more likely to cross all economic spheres. Unfortunately a test of this does not provide significant results. A model allowing the inflation item to load on both personal and state factors has too small an improvement in the chi-square statistic ($\chi^2 = 4.3_{(2)}$ $p > .10$). It is an unexplained result. Fortunately, the size of the parameter is secondary to the question of whether the factors are independent of each other.

The general conclusion is clear. While state economic evaluations are more closely linked to national conditions than to personal evaluations, the state factor still constitutes a unique sphere that is distinguishable to the electorate.

NES Analyses

Having established the economic evaluations for the BEBR data we turn to the NES data. The data provide the opportunity to test group economic judgments, though this is nearly a forgone conclusion given the work of Kinder et al. (1989), as well as prospective versus retrospective evaluations. For all three datasets used in this study, the same logic used above is applied to the construction of the competing models. Each dataset is tested with a single factor model. In addition, future or prospective evaluations are estimated only in comparison to a model presupposing that all of the other factors are independent. That means, for example, that whether the only two economic factors are prospective and retrospective regardless of the specific area of concern can be tested though a positive result would be viewed skeptically. It would contradict too much prior research indication personal, group, and national spheres and would have very little logical support.

Focusing specifically on 1984 we see that this is the most complex of the three datasets. The presence of group and prospective evaluations creates five theoretically defensible models. The first is the single factor model already described. The second loads personal and group variables

onto one factor while the third loads group evaluations with national conditions. In contrast to the previous analysis with state perceptions it is expected here that group evaluations will be most closely correlated with personal judgments. Model 4 argues for three independent latent structures and given past research is almost certain to have a good fit.³ Finally, model 5 posits a single prospective evaluation that includes both national and personal judgments.

In contrast to the 1984 data both the 1988 and 1992 datasets are far simpler. Without the state variable included in the analysis there are only three potential models. These include the ubiquitous single factor model, a two factor model including both personal and national evaluations, and a three factor model positing that the prospective factor exists.

Table 3-3 summarizes the success of all competing models for the three NES datasets. The results for each election clearly fit within past findings. Personal, national, and group evaluations all appear to be distinct from each other. In addition, the research by MacKuen et al. (1992) is supported, even using the limited the prospective factor available with these data. The consistency of these findings suggest that the variables used in this research, while not the same as past research, are similar enough to

³Note that the variables used in this research are similar to, but not exactly the same as the variables selected by Kinder et al.. Because I need comparability across three datasets I was limited to only those items available in all three for the personal and national spheres. In addition, I have decided against post-hoc modeling and so will not obtain as strong a fit as Kinder, Adams, and Gronke (1989).

Table 3-3.
Comparisons of Alternative Confirmatory Factor Analytic Models
NES Data.

1984 NES	1988 NES	1992 NES
Model 1: 1 Factor	Model 1: 1 Factor	Model 1: 1 Factor
667.8/54 (.8462) [.7086]	407.6/27 (.7916) [.8287]	660.1/27 (.7348) [.8038]
Model 2: 2 Factors:- Personal/Group and National	Model 2: 2 Factors- Personal and National	Model 2: 2 Factors- Personal and National
459.4/53 (.8981) [.7961]	182.3/26 (.9145) [.9258]	174.0/26 (.9376) [.9499]
Model 3: 2 Factors- National/Group and Personal	Model 3: 3 Factors- Personal, National, and Future	Model 3: 3 Factors- Personal, National, and Future
535.4/53 (.8791) [.7628]	173.0/24 (.9185) [.9291]	134.8/24 (.9579) [.9658]
Model 4: 3 Factors- Personal, Group, National		
230.1/51 (.9551) [.9044]		
Model 5: 4 Factors- Personal, Group, National, and Future		
212.0/48 (.9590) [.9121]		

Note:

First lines of cell entries represent $\chi^2/\text{degrees of freedom}$.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_2 (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_4 .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

provide complementary results. Taking Tables 3-2 and 3-3 together suggests that the general public does discriminate between national, personal, group, state, and prospective economic spheres.

Breaking down each of the most significant models, Tables 3-4 to 3-6 present the factor loadings for each of the parameters. Table 3-4 shows that all observed variables has significant non-zero loadings for their respective factors. The relative weights show that unemployment ranks as one of the most powerful observed variables, while the prospective items that can be estimated possess significant, but slightly smaller loadings than the rest. In addition it is interesting to note that the loading for personal prospective evaluations is lower than the loading for the prospective national judgments. This suggests that national concerns predominate in this model and gives some suggestion that there may be two or more prospective spheres. The overall fit for the model is acceptable in terms of both DELTA2 and McDonald's centrality measure. This is true despite the large size of the chi-square. Even divided by the degrees of freedom the chi-square suggests a poor fitting model and underscores how the sample size can bias some measures of fit. Tables 3-5 and 3-6 present similar results for the 1988 and 1992 data. Like the 1984 loadings R's prospective evaluations show weaker relationships to its factor than do national evaluations. In both cases the coefficients are smaller, suggesting that future research should attempt to obtain multiple prospective items for each potential factor. The data also make a strong case of a multi-election study. In 1984, for example, the

Table 3-4
Parameter Estimates for Confirmatory Factor Analysis Model for 1984 ANES.

Variables	Factor 1: Personal	Factor 2: Group	Factor 3: National	Factor 4: Future
R's Current Financial Condition	1.000 (-----)			
R's Income versus the Cost of Living	.9306** (.0481)			
How Federal Policies Affect R's Financial Condition	1.176** (.0605)			
Group's Economic Condition		1.000 (-----)		
Group's ability to keep up with Cost of Living		.8293** (.0343)		
How Federal Policies have affected R' Group		.9125** (.0350)		
National Levels of Inflation			1.000 (-----)	
National Levels of Unemployment			1.943** (.1265)	
General National Economy			1.806** (.1152)	
How Federal Policies Affect the Nation's Economy			1.160** (.1169)	
Expectations for the Nation's Future Economy				1.000 (-----)
Expectations for R's future Financial Condition				.7978** (.0827)
Chi-square/d.f=212.0/26	$\Delta_2 = .9590$	$m_k = .9121$		N= 890

Note: Coefficients are unstandardized. Standard Errors are in parentheses.

* = $p < .10$; ** = $p < .05$.

Table 3-5.
Parameter Estimates for Confirmatory Factor Analysis Model for 1988 ANES

Variables	Factor 1: Personal	Factor 2: National	Factor 3: Future
R's Current Financial Condition	1.000 (-----)		
R's Income versus the Cost of Living	.9239** (.0621)		
How Federal Policies Affect R's Financial Condition	.5302** (.0394)		
National Levels of Inflation		1.000 (-----)	
National Levels of Unemployment		1.280** (.0988)	
General National Economy		1.333** (.0919)	
How Federal Policies Affect the Nation's Economy		1.243** (.0862)	
Expectations for Next Year's National Economy			1.000 (-----)
Expectations for R's future Financial Condition			.7020** (.1052)
Chi-square/d.f. = 173.0/24	$\Delta_2 = .9185$	$m_t = .9291$	N = 1012

Note: Coefficients are unstandardized. Standard Errors are in parentheses.

* = $p < .10$; ** = $p < .05$.

Table 3-6.
Parameter Estimates for Confirmatory Factor Analysis Model for 1992 ANES

Variables	Factor 1: Personal	Factor 2: National	Factor 3: Future
R's Current Financial Condition	1.000 (-----)		
R's Income versus the Cost of Living	.9000** (.0454)		
How Federal Policies Affect R's Financial Condition	.4320** (.0266)		
National Levels of Inflation		1.000 (-----)	
National Levels of Unemployment		1.086** (.0646)	
General National Economy		1.430** (.0844)	
How Federal Policies Affect the Nation's Economy		.4477** (.0615)	
Expectations for Next Year's National Economy			1.000 (-----)
Expectations for R's future Financial Condition			.4848** (.0704)
Chi-square/d.f. = 124.8/24	$\Delta_2 = .9579$	$m_2 = .9658$	N = 1448

Note: Coefficients are unstandardized. Standard Errors are in parentheses.

* = $p < .10$; ** = $p < .05$.

impact of federal policies for the respondent had a larger factor loading than it did in either 1988 or 1992. These differences suggest that the public takes different economic concerns into account but such a proposition would require more detailed examination.

Tables 3-1 to 3-6 provide clear evidence that the general electorate can and does distinguish between at least five economic spheres. The BEBR data show that state evaluations are significantly different from either personal or national judgments. The 1984 data confirm past research with regard to the distinctiveness of group economic evaluations. In addition the NES data provide some strong preliminary evidence supporting the idea that many voters think about economics in prospective terms, especially at the national level. However, the limit of just two prospective variables makes more detailed analyses impossible. These results, then, provide a preliminary step to the primary analyses of this chapter which are aimed specifically at the question of constraint.

Analyses of constraint

The working hypothesis for the remainder of this chapter is that education and attention to the campaign affect the way people structure their evaluations; those with higher levels of attention or education will show higher levels of constraint. Drawing on a large past literature I argue here that political sophistication will differ among various subsamples on the basis of the cognitive resources available for and applied to politics.

Different levels of sophistication will be evidenced by increased or decreased levels of constraint. The exact relationship will depend upon the type of constraint being examined.

Inter-sphere Constraint

Constraint across different economic spheres, inter-sphere constraint, implies that people should be able to discriminate between a variety of economic spheres. That is, people are expected to respond to answers regarding the condition of the nation somewhat differently than they respond to questions about their own personal conditions. Past research and the first part of this chapter have shown that this argument holds true for the general electorate. The next question is whether it holds true for specific subsamples.

It is expected that as education decreases constraint will increase. This runs counter to the traditional definition of constraint wherein higher constraint represents greater political sophistication. This situation, however, is different. Rather than ask that the public think along a single philosophical dimension we are expecting them to use several economic dimensions in their decision making process. The more a person is able to distinguish themselves, the nation, their state, and their group, the more sophisticated they are considered.

Similar arguments have been made by Popkin (1991) but using a very different theoretical basis. Popkin argues that the influence of education is

to "broaden" political attitudes rather than "deepen" them. Deepening refers to the idea that increasing levels of education make it possible for the general public to formulate better, more detailed, opinions regarding the various issues confronting them. In short, the public's understanding of politics increases. Popkin suggests that increased education makes it possible for the general public to perceive more issues as politically relevant. The more educated the individual, the more political issues that person will perceive as being related to their lives. In terms of this research, Popkin's theory implies that higher levels of education will increase the number of economic spheres that the individual can distinguish. In short, both Popkin and the more traditional theory of constraint suggest that people with more education will discriminate better between the various economic spheres.

The reverse holds true for the lack of sophistication. If a person combines his or her opinions regarding the economy into one lump evaluation or perceives only a limited number of issues as relevant then we would consider him or her to have a lower degree of sophistication. Given that much research has demonstrated the strength of the relationship between sophistication and education, it is reasonable to expect less educated people will distinguish fewer factors than more educated individuals. The hypothesis remains the same for attention to the campaign as well.

Tables 3-1 to 3-6 described and tested several potential ways economic judgments could be structured. Those same models are repeated below. This same analytic procedure is repeated after dividing the full sample into quartiles based upon education and interest.⁴ The results of these tests are presented in Tables 3-7 to 3-9. Each of these tables parallel the models presented in Table 3-3 only now they are estimated for each subsample. If the hypotheses are true then the most significant or best fitting model should vary from simple to more complex on the basis of education or attention to the campaign. Unfortunately the hypothesis is uniformly rejected.

Table 3-7 shows a slight tendency toward supporting the hypothesis. The lowest quartile for education evidences a simpler model than does the group as a whole. Specifically, the least educated show no significant use of the prospective latent structure. By contrast the next two groups do distinguish between prospective and retrospective evaluations. However, the highest educated group does not. It is possible that those with the most education fail to discriminate between prospective and retrospective evaluations because they do have better developed attitudes. Recall that the prospective sphere is measured using both personal and national level

⁴The BEBR data contained just over 200 voters. This means that the subsamples are too small to provide acceptable estimates. Specifically, the bottom and upper middle categories would have too few cases to estimate the models. So the BEBR data are excluded for the remainder this section.

Table 3-7.
Comparisons of Alternative Models based upon levels of Education and Attention to the Campaign.
1984 NES.

	Education					Attention to the Campaign				
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile		
Model 1: 1 Factor	75.1/54 (.9466) [.9118]	227.0/54 (.8504) [.7436]	232.0/54 (.8289) [.6745]	274.7/54 (.8004) [.6384]	193.0/54 (.6852) [.5522]	185.4/54 (.7474) [.6253]	182.6/54 (.8829) [.7064]	201.5/54 (.8789) [.6966]		
Model 2: 2 Factors- Personal/Group and National	62.5/53 (.9759) [.9591]	162.3/53 (.9056) [.8293]	170.5/53 (.8871) [.7710]	213.7/53 (.8611) [.7316]	128.4/53 (.8296) [.7245]	138.9/53 (.8352) [.7358]	160.2/53 (.9025) [.7484]	176.8/53 (.8984) [.7383]		
Model 3: 2 Factors- National/Group and Personal	63.5/53 (.9734) [.9550]	179.4/53 (.8908) [.8053]	200.3/53 (.8585) [.7218]	237.1/53 (.8409) [.6990]	160.7/53 (.7566) [.6311]	150.6/53 (.8127) [.7056]	149.7/53 (.9120) [.7699]	165.2/53 (.9079) [.7596]		
Model 4: 3 Factors- Personal, Group, National	49.9/51 (1.003) [1.005]	93.0/51 (.9637) [.9305]	107.7/51 (.9456) [.9286]	152.1/51 (.9128) [.8215]	62.9/51 (.9732) [.9503]	92.8/51 (.9202) [.8615]	97.4/51 (.9579) [.8822]	107.4/51 (.9538) [.8708]		
Model 5: 4 Factors- Personal, Group, National, and Future	45.4/48 (1.007) [1.012]	86.3/48 (.9670) [.9364]	86.8/48 (.9629) [.9178]	151.7/48 (.9107) [.8172]	63.4/48 (.9655) [.9361]	82.3/48 (.9349) [.8848]	95.8/48 (.9567) [.8788]	105.7/48 (.9529) [.8681]		

Note:

First lines of cell entries represent $\chi^2/\text{degrees of freedom}$.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_2 (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_* .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

variables. It is possible that the prospective factor is not significant because the respondents perceive two prospective spheres and that combining both questions into a single sphere worsens the fit to the data. Unfortunately that explanation cannot be tested without more complete measures of both personal and national retrospective evaluations. Turning to the second half of the table a similar pattern is in evidence. In this case, the only group to utilize the prospective dimension is the lower middle quarter. The rest show no significant use of prospective evaluations. In short, the hypothesis fails, though it may fail for different reasons with each subgroup.

One final note before turning to the other tables. Once again the impact of sample size on the chi-square statistic is clear. Notice that the lowest quartile for education, which is the smallest subsample, has consistently low chi-squares and low ratios when compared to the degrees of freedom. This is especially pronounced when compared to the adjacent column which show similar overall fits, but much higher chi-square ratios.

The 1988 and 1992 NES data offer no more support than the 1984 data. For the 1988 data presented in Table 3-8 the pattern of null findings is similar to that found for 1984. Dividing the sample based upon education reveals an odd pattern with the lower-middle and highest quartiles favoring the simpler, two factor, model while the bottom and upper-middle quartiles show the best fit with the three factor model. Campaign attention, however, is even more unusual. None of the four quartiles show support for the

Table 3-8.
Comparisons of Alternative Models based upon levels of Education and Attention to the Campaign.
1988 NES.

	Education				Attention to the Campaign			
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile
Model 1: 1 Factor	63.8/27 (.8047) [.8754]	117.9/27 (.8155) [.8632]	114.2/27 (.7863) [.7996]	179.7/27 (.7802) [.8065]	45.2/27 (.8993) [.9017]	106.3/27 (.7374) [.7897]	102.4/27 (.8293) [.7913]	134.6/27 (.7164) [.7052]
Model 2: 2 Factors- Personal and National	34.4/26 (.9555) [.9700]	60.1/26 (.9309) [.9463]	74.8/26 (.8806) [.8823]	99.3/26 (.8946) [.9019]	37.9/26 (.9347) [.9348]	59.9/26 (.8881) [.9040]	68.7/26 (.9034) [.8757]	64.9/26 (.8978) [.8815]
Model 3: 3 Factors- Personal, National and Future	25.6/24 (.9917) [.9943]	55.6/24 (.9362) [.9501]	67.6/24 (.8939) [.8942]	96.9/24 (.8955) [.9024]	34.6/24 (.9420) [.9412]	58.7/24 (.8864) [.9020]	67.7/24 (.9017) [.8730]	84.1/24 (.8429) [.8228]

Note:

First lines of cell entries represent χ^2 /degrees of freedom.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_2 (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_4 .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

prospective factor which implies that the factors are dependent upon control variables, but not in the way hypothesized above. Table 3-9 also contradicts the hypothesis that lower levels of education and attention result in simpler economic models. Six of the eight groups distinguish between personal and national, retrospective and prospective evaluations. The other two favor the simpler model that excludes prospective judgments. Similar to the results in 3-7, the highest quartile for attention to the campaign shows no evidence of prospective evaluations. The same potential explanation applies; that subsample may reject the mixing of personal and national prospective judgments. In all there is little support for the idea that economic attitudes are structured differently on the basis of education or attention to the campaign.⁵

Intra-sphere Constraint

If people are able to distinguish equally well between economic spheres are they also equally consistent in their responses to questions dealing with the same economic sphere? This is the final question addressed in this chapter. Here the more traditional constraint theory

⁵The hypothesis that the actual level of knowledge was also tested, though not presented. The sample was divided based upon answer to the questions regarding the direction of unemployment and inflation. As with education and interest, knowledge did not influence the structure of economic attitudes.

In addition, Appendix A presents parallel analyses of the 1984 and 1988 data using only validated voters for whom vote choice is available. The results match the ones presented in the text almost perfectly and nothing suggests a different substantive conclusion.

Table 3-9.
Comparisons of Alternative Models based upon levels of Education and Attention to the Campaign.
1992 NES.

	Education				Attention to the Campaign			
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile
Model 1: 1 Factor	98.1/27 (.7997) [.8081]	249.3/27 (.6708) [.7832]	206.6/27 (.7283) [.7885]	203.1/27 (.7387) [.8072]	103.2/27 (.7399) [.8053]	88.6/27 (.8235) [.8705]	91.1/27 (.7963) [.8245]	156.9/27 (.6662) [.6999]
Model 2: 2 Factors- Personal and National	50.9/26 (.9295) [.9283]	98.4/26 (.8929) [.9235]	53.9/26 (.9578) [.9637]	61.1/26 (.9480) [.9582]	54.8/26 (.9020) [.9214]	33.7/26 (.9780) [.9828]	53.7/26 (.9123) [.9201]	46.3/26 (.9479) [.9457]
Model 3: 3 Factors- Personal, National, and Future	39.8/34 (.9554) [.9538]	63.5/24 (.9418) [.9575]	50.6/24 (.9600) [.9654]	49.8/24 (.9619) [.9691]	46.7/24 (.9232) [.9375]	25.9/24 (.9945) [.9957]	36.6/24 (.9605) [.9629]	42.9/24 (.9519) [.9495]

Note:

First lines of cell entries represent χ^2 /degrees of freedom.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_p (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_c .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

implies that education and attention to the campaign should be related to increased constraint. The more resources a person has and/or devotes to politics, the greater their consistency when responding to similar questions. Popkin's (1991) theory predicts the opposite. If Popkin is correct in that education increases the number of politically relevant issues but does not increase political knowledge or understanding, then education and attention will have no influence upon intra-sphere constraint. Thus, while Popkin and constraint theory converged earlier, here they provide contradictory hypotheses. As suggested above, the Barton and Parsons statistic (1977) is used below to determine how education influences intra-sphere constraint.

Earlier it was stated that the Barton-Parsons test could not be calculated prior to establishing the economic spheres to be tested. After all, one cannot determine the extent to which attitudes are related until one knows which attitudes are thought to be considered similar. Therefore the latent models found to be significant in tables 3-1 and 3-3 were used to decide which questions would be examined and in what grouping.

The Barton-Parsons test allows the researcher to examine the level of consistency in responses to similar questions at the individual, rather than aggregate, level. The calculation of the statistic is a two-step process. First the arithmetic mean for the series of questions is calculated. Then, the mean is subtracted from a person's responses to the series of questions. This creates a standard deviation that is determined for each person in the

sample. Their standard deviation serves as a measure of how consistent a person is in their responses. Constraint theory posits that a person will respond similarly to questions related to a similar concept. This means that the larger the standard deviation the lower the level of constraint. Thus, it is hypothesized that as education and interest/attention increase the standard deviations of the responses will decrease.

Since this research focuses on the differences in constraint among various groups, rather than all individuals, it is unnecessary to examine all the standard deviations. Taking cues from Barton and Parsons, only the means for each subsample are computed (1977). This provides the average individual level constraint for each group of interest. It is expected, according to the hypothesis described above, that the mean standard deviation will decrease as education and interest increase. The results are presented in Table 3-10 for the BEBR data and Tables 3-11 to 3-13 for the NES data.⁶ The data in the each cell represent the average standard deviation for responses to questions for each economic sphere. If education or interest affect the constraint of responses to these items then we would expect the standard deviations to have an inverse relationship to education or interest.

⁶Note that the Barton-Parsons test can only be calculated when there are multiple items for each evaluative area. Therefore, it is only presented for economic judgments where more than one question was asked. This excludes state evaluations in 1988 and 1992 and personal and group judgments in the BEBR study.

Table 3-10.
 Barton-Parsons Measure of Mean Standard Deviation for BEBR Data.

	Levels of Education				Sample Mean
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	
National Economic Perceptions	.9819 (N=16)	.8893 (N=63)	.8668 (N=80)	.8712 (N=72)	.8823 (N=231)
State Economic Perceptions	.3048 (N=16)	.4425 (N=74)	.5252 (N=98)	.4369 (N=80)	.4883 (N=268)
Personal Economic Perceptions	.5828 (N=12)	.6420 (N=67)	.6159 (N=84)	.6493 (N=77)	.6323 (N=240)

Table 3-11.
Barton-Parsons Measure of Mean Standard Deviation for 1984.

	Levels of Education					Attention to the Campaign				
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean
Future Economic Perceptions	.6321 (N=181)	.6810 (N=410)	.5939 (N=288)	.6805 (N=345)	.6532 (N=1224)	.6670 (N=175)	.6535 (N=197)	.6211 (N=237)	.6482 (N=267)	.6458 (N=876)
National Economic Perceptions	.7815 (N=183)	.6960 (N=427)	.6962 (N=300)	.7040 (N=347)	.7107 (N=1257)	.6923 (N=177)	.6922 (N=203)	.6410 (N=252)	.7740 (N=272)	.7026 (N=904)
Group Economic Perceptions	.5168 (N=146)	.5446 (N=354)	.4527 (N=262)	.4546 (N=296)	.4928 (N=1058)	.4997 (N=142)	.4637 (N=166)	.4936 (N=220)	.4762 (N=245)	.4827 (N=773)
Personal Economic Perceptions	.5941 (N=199)	.5901 (N=438)	.6092 (N=308)	.6137 (N=345)	.6016 (N=1292)	.5789 (N=176)	.6142 (N=201)	.6056 (N=265)	.5997 (N=284)	.6006 (N=926)

Table 3-12.
Barton-Parsons Measure of Mean Standard Deviation for 1988.

	Levels of Education					Attention to the Campaign				
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean
Future Economic Perceptions	.6977 (N=368)	.7099 (N=639)	.7591 (N=308)	.7479 (N=474)	.7259 (N=1789)	.7429 (N=169)	.6670 (N=238)	.7038 (N=213)	.7148 (N=194)	.7038 (N=814)
National Economic Perceptions	.7019 (N=356)	.6534 (N=641)	.6633 (N=309)	.6768 (N=478)	.6711 (N=1784)	.6862 (N=167)	.6363 (N=238)	.6626 (N=224)	.7196 (N=208)	.6740 (N=837)
Personal Economic Perceptions	.6915 (N=402)	.6367 (N=696)	.6612 (N=322)	.7012 (N=489)	.6689 (N=1909)	.6462 (N=185)	.6088 (N=250)	.6501 (N=235)	.6816 (N=213)	.6452 (N=883)

Table 3-13.
Barton-Parsons Measure of Mean Standard Deviation for 1992.

	Levels of Education					Attention to the Campaign				
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean
Future Economic Perceptions	.7289 (N=169)	.6166 (N=504)	.7078 (N=417)	.6831 (N=443)	.6730 (N=1053)	.6225 (N=198)	.6520 (N=247)	.6280 (N=168)	.7207 (N=197)	.6566 (N=810)
National Economic Perceptions	.7417 (N=172)	.7532 (N=518)	.7471 (N=424)	.7973 (N=452)	.7630 (N=1566)	.7138 (N=194)	.7831 (N=248)	.7550 (N=177)	.7845 (N=208)	.7612 (N=827)
Personal Economic Perceptions	.7096 (N=186)	.6151 (N=526)	.6144 (N=429)	.6404 (N=466)	.6332 (N=1607)	.6072 (N=201)	.6076 (N=252)	.6099 (N=180)	.6481 (N=210)	.6181 (N=843)

The results are clearly more supportive of Popkin's position. Looking only at the BEBR data for national economic evaluations we can get a rough idea of what the results would be for all datasets and all economic spheres if the constraint theory was accurate. The bottom quartile has a fairly high average standard deviation and the highest quartile has a much lower mean standard deviation. However, the rest of the spheres and datasets defy that pattern. Looking at four datasets as a whole we see that there is no clear pattern to the levels of constraint. In fact, the lowest education groups sometimes have the greatest constraint. More telling is the fact that in a majority of the twenty-one tests conducted the mean standard deviation for the top quartile in either education or attention is higher than the mean for the entire sample. Most of these differences are not statistically significant suggesting that the level of education has no influence on levels of constraint. In short, Popkin's theory is partially supported. Education does not appear to "deepen" political understanding, at least with regard to economic voting. However, the data offer no insight as to whether a "broadening" has occurred.

If the subsamples do not differ in terms of constraint, do the evaluative areas themselves differ? That is, are some economic spheres more or less constrained than others? The answer is not wholly unambiguous but a tendency does exist. Looking at the four studies which contain multiple measures of national and personal economic evaluations we

can see that in every case personal evaluations are more strongly constrained than national level judgments. The average standard deviation for these data is 0.647 for personal finances but 0.758 for national evaluations. In 1988 the difference is quite small but it still exists. That personal evaluations are more consistent than national ones should not be surprising. One's own economic conditions are far more relevant and immediate than the nation's. The subject under scrutiny, most likely the family's income, is almost certainly highly salient while measures of national economic performance are more detached as well as more complicated and varied. However, an anomaly is present in these results.

While personal evaluations are more constrained than national ones, group and state economic perceptions are even more highly constrained. Without more data it is impossible to get an understanding as to whether this is an aberration or a real effect. For now, however, no reason is suggested to reject the evidence. Neither group nor state evaluations have acted unusually thus far and they should not be suspected now. Given that, how can these results be explained? It is clear, both logically and, for group evaluations, empirically, that these two economic spheres are far less salient than personal financial conditions.

With regard to group judgments, in both the 1984 and BEBR data approximately sixty percent of the sample could not name a primary group attachment without prompting and twenty percent never provided a group

affiliation. The reason for the higher constraint for group evaluations is most likely due to the weeding out process involved in the question. The percentage of "don't knows" is higher for these questions than for any others. Those able and willing to respond are likely to be unrepresentative of the general population. Similarly, the question may be subject to a stronger response bias wherein respondents give one response and stick to it since their attitude is less well developed. Determining which, if either of these is the case is impossible without a questionnaire designed to tap that effect. For now this simply remains the most logical explanation.

In contrast, the respondents for the BEBR data did *not* give a higher number of "don't knows" for the questions relating to the state than for personal or national judgments. That does not preclude the potential effect of a response bias, but it does make it harder to accept the idea. If state evaluations are less well developed than personal or national judgments, more people should opt out of answering the questions. But they did not. In all it is yet another unexplained result.

It is worth noting that the above logic could be expanded to explain the general results. It may be that the bottom quartile shows evidence of greater constraint because they have less developed attitudes and so use their past answers as cues for additional answers. As the level of education and attention shifts the amount of bias decreases, causing a corresponding decrease in constraint. This would give the appearance of higher constraint

for the bottom quartiles but solely because of the way that group answered the questions. A similar effect could bias the confirmatory factor analyses since they are based upon covariances between questions and a response bias would cause related questions to be highly correlated.

All of this is possible because it is much easier for a respondent to see the connection between economic items than it is to connect items related on an ideological spectrum. For example, questions concerning unemployment and the general economy are clearly related, even for the least sophisticated individuals. On the other hand, questions about taxes and regulating business may not have such an obvious connection. The lack of clear connection makes a response bias impossible. After all, how can a person use past answers to help with new answers if they do not recognize that the questions are related? The logic is appealing, if only as a way to explain the null findings, but unfortunately it cannot be tested with the data at hand.

The general conclusion offered by this chapter is that constraint is even across levels of education and interest. Some spheres are more commonly distinguished from others; prospective evaluations are not universally used. But the basic economic models discussed in the literature can be found in both the general electorate and specific subsamples of it. In addition, there are at least five economic spheres that can be distinguished by the public and some evidence is available suggesting that more spheres may exist as well. It is also clear that some economic spheres have higher

levels of intra-group constraint than others; group and state evaluations are far more consistent than personal or national judgments. Why this is the case remains unclear and the relationship is unaffected by education or attention to the media. In short, there is nothing that suggest that economic evaluations function similarly to ideology. Constraint is consistent across the electorate without regard to differing cognitive resources or their allocation.

CHAPTER 4 ECONOMIC VOTING AND COGNITIVE RESOURCES

The previous chapter finds no relationship between the structure of economic attitudes and cognitive resources, as measured by education and attention to a campaign. People are able to distinguish between the various economic spheres that past research has posited, at least for the elections analyzed here. The first goal of this chapter is to examine whether cognitive resources influence the utilization of economic attitudes. Is there a systematic pattern to the way in which people weight personal, group, state, and national economic perceptions? The secondary goals involve estimating the relationships between the various economic spheres, the objective economic context, and vote choice. This chapter first details these relationships then examines the influence of education and campaign attention.

As noted in chapter 1, the relationships between state economic conditions, national economic conditions, and electoral outcomes are unclear. At least three potential models can be theorized. First, a direct linkage may exist wherein voters hold the President accountable for the condition of the state. Second, an indirect linkage may exist with the voters holding the President accountable for the condition of the nation while understanding

that the condition of the state is a partial reflection of the national condition. That is, people may use the condition of the state as additional information when evaluating the condition of the nation. Chapter 3 provides support for these two models since both require that the individual be able to distinguish between state and national conditions. Thus, one question to be addressed is whether a direct or indirect relationship exists between state and national judgments. To accomplish this, the BEBR data will be examined to determine whether the state economic factor influences vote choice, even in the presence of other political and economic variables. Then state economic perceptions will be tested with national judgments to determine if the impact is indirect.

Finally, a second indirect linkage can be hypothesized. Under this line of reasoning the state or local area acts as a filter for the gathering of economic information. People collect information on the economy and this information may be biased by the context from which it is gathered. This logic does not require that people perceive the state economy as distinct, or have any opinion regarding their state. The context itself influences the information gathered and thereby biases the decision making process. The results in chapter 3 do not disprove the third model. It is possible for this form of indirect linkage to operate in concert with either of the two models described previously.

Accordingly, the analyses must incorporate measures of the local economic context. In this case, the measure selected is similar to that used by Weatherford (1983a). The state or county-wide percentage change in employment is calculated for the year of the election (Florida Department of Labor, 1992; U.S. Department of Labor, 1985, 1989, 1993) and included as an aggregate measure of the economic context. The logic of this theory argues that a person living in a prosperous area will be exposed to more positive economic information than a person living in a less prosperous context. This exposure should bias individual level judgments regarding the condition of the national economy and therefore the vote distribution. This could explain why some researchers have found state by state variations in vote choice.

Building directly on the logic of an economic context is the research offered by Mutz (1992). She suggests that the local context might influence perceptions through political and economic discussions with friends and co-workers (1992). The greater the amount of discussion the more likely the context will have an influence. For example, living in a state that is struggling economically may increase one's chance of encountering individuals who also have weak financial conditions. The more discussion one engages in, the more likely one is to receive negative information from associates. The reverse is true for prosperous states. Logically then, the context and the amount of political or economic discussion should interact. In order to test this theory two interaction terms are created out of the state unemployment rate and the variable measuring discussion. One interaction

term gauges the impact of low levels of discussion while the other measures the impact of high levels. If the context matters as Mutz argues, the interaction terms should show an influence upon economic attitudes. The preceding questions are all evaluated using the full samples for each dataset. Some questions, however, require breaking the samples down as in chapter 3.

Kramer (1983) argues that perceptions of the economy, as measured in surveys, are less important than the actual condition of the economy. Perceptions are prone to error and thus their influence on vote choice more problematic. I argue that it is only through perceptions that objective conditions can be translated into voting decisions. People do not utilize pure information, but rather their understanding of the information. If that understanding is biased, then the vote decision will be biased. More importantly, the error seen in economic perceptions may itself be of interest. Is it systematic in any way? For example, Scicchitano implies that the connection between objective conditions and economic attitudes may vary across groups of voters (1984, 791). By splitting the sample this research pays special attention to two potential sources of bias.

Education and attention to the campaign may influence not just how people perceive the economy, but also how they use that information. That is, people with better education may not only see the economy as being better or worse than people with less education, they might take into

account different economic spheres. Weatherford (1983b) demonstrates that people with lower levels of attention to the media more heavily weight personal economic judgments. For this reason the full samples are again broken into halves in order to determine whether some groups place more or less emphasis upon certain economic factors.

The analyses are presented in two parts. The first section estimates general equations for the full sample of each dataset. The second uses the same equations for the various subsamples.

One of the most critical portions of these analyses is the construction of the economic scales. One option is to create simple additive scales built from a selected group of variables. Unfortunately this procedure will not produce scales analogous to the factors found in chapter three, even if it uses the same variables. For that reason I have created factor scales using the CFA results. The factor loadings, when adjusted by their z-score, create factor scores that can be used to create a scale. The use of standardized values in factor scores ensures that the scales have equivalent variance owing to question coding (Levine, 1973) and are based upon the relative loadings of the individual observed variables. This creates a scale that is consistent with the latent structures shown in chapter 3. The most significant models and their accompanying factors from chapter 3 are replicated in the following analyses.

The choice of estimation procedure also deserves some attention. Two-stage least squares regression (2SLS) is utilized here. Most studies of economic voting have relied upon recursive modeling which implies a one-way causal relationship between the variables of interest. For most analyses the direction of causality is provided by theory. In the case of economic voting, however, some theories suggest reciprocal, or non-recursive, relationships.

The most obvious potential non-recursive relationship is between party identification and economic evaluations, especially national economic perceptions. Fiorina (1981) argues that voters constantly gather information to evaluate a candidate and his or her party. By taking past performance into account, Fiorina suggests that retrospective evaluations will influence not only a person's evaluation of the candidate but also his or her perception of the party of the candidate. In short, Fiorina argues that national economic perceptions can influence attachment to a party. The reverse relationship has been documented in past research (Kinder and Kiewiet, 1981) and also has a theoretical foundation. Lodge, McGraw, and Stroh (1989) have shown that policy preferences and partisanship can serve as perceptual screens. As people encounter and collect information they selectively retain information that supports their preferred positions while rejecting information that threatens those positions. This implies, for example, that a Republican would retain positive economic information and discard negative

information when a Republican controls the White House. In short, party affiliation would directly influence economic perceptions. Two-stage least squares makes it possible to control for the kind of non-recursive model described above.

Other potential reciprocal relationships can also be examined. The relationship between state economic perceptions and national economic perceptions has not been tested in prior research. Theoretically, however, it is possible that people use national level information to impute the condition of their state. National economic information is readily available from both television and newspapers. State economic information is more rarely covered and is probably covered in less detail. In forming an opinion about the state it is possible for them to infer the state's condition from the nation's. It is equally possible that people extrapolate from their knowledge of their state, whether limited or extensive, to that of the nation. By using two-stage least squares it is possible to test the latter while controlling for the former. Finally, Kinder, Adams, and Gronke (1989) suggest that vote choice and group economic perceptions may have non-recursive relationships with national economic perceptions. Using 2SLS enables me to complement their research.

A second modeling option may be briefly considered. It is possible to utilize confirmatory factor analytic techniques to estimate a causal model. Unfortunately, that kind of structural equation modeling is impossible in the

present case. The ultimate variable of interest, vote choice, is represented by only one variable, and while it is a nearly perfect representation of vote preference, it would be impossible to analyze it using CFA. Vote choice would have no covariance and so could not be estimated since factor and structural equations are built upon the analysis of latent rather than observed variables.

In short, two-stage least squares provides a methodology that is consistent with both the hypotheses to be tested and with the past literature related to economic voting.

Full Sample Analyses

The first dataset analyzed focuses directly upon the first questions posed. Table 4-1 presents the results using the full BEBR sample. The first column presents the logistic regression results for the vote choice equation. As described in chapter 2, each column to the right takes one independent variable and uses it as a dependent variable. Note that several variables described in equations 2-1 to 2-6 are missing. Specifically, there is no distinction between prospective and retrospective evaluations,¹ no measure of group economic perceptions, and no measures of discussion. The equations presented earlier are modified accordingly. The first column presents the predictors of vote choice. The most striking result is that no

¹The BEBR questions focus primarily on current conditions or prospective conditions. Only one retrospective evaluation question is available.

Table 4-1.
The Relationships between Economic Factors
and Vote Choice using BEBR Data.

	Vote Choice ¹	Prospective National Economic Perceptions ²	Prospective State Economic Perceptions ²	Prospective Personal Financial Conditions ²
Vote Choice ³	—	4.978 (12.80)	—	—
National Economic Perceptions ³	.0632 (.0698)	—	—	—
State Economic Perceptions ³	-.0182 (.0389)	.1501 (.2127)	—	—
Personal Economic Perceptions ³	-.0292 (.1290)	.6491 (.7652)	-.5276 (1.053)	—
Change in County Unemployment ⁴	-3.840 (3.032)	—	2.360 (7.091)	.3952 (1.786)
Party Identification ⁴	1.154** (.2178)	-.0472 (2.428)	.9395** (.3762)	-.1118 (.0993)
Family Income ⁴	.2421* (.1399)	—	—	.0347 (.0347)
Occupation ⁴	.1280 (.1812)	—	—	.1238* (.0734)
Race ⁴	-.9208 (.9651)	—	—	-.1654 (.5230)
Gender ⁴	.5050 (.4904)	—	—	-.3448 (.2458)
Age ⁴	-.0005 (.0162)	—	—	-.0238** (.0093)
(Constant)	-5.521** (2.515)	-2.535 (8.629)	16.87** (8.431)	9.321** (1.173)
N=146	$\chi^2 < .0001$	Adj R ² = .10	Adj R ² = .02	Adj R ² = .04

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in the 2 SLS regression analyses.

⁴ Used as an Instrument in the 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

economic variables obtain significance.² Party identification is significant and family income is marginally significant, but those are the only variables that offer any insight into vote choice. This result contradicts both past research on economic voting and conventional wisdom regarding the influence of the economy in the 1992 election.³ Again, however, I must point out Clinton support was over-represented in the BEBR survey. This may serve to obscure the relationship between vote choice and economic evaluations. In addition, the small sample size and potential multicollinearity are also likely problems with the analysis.

With that in mind we can examine the rest of the table. Column 2 offers no significant results. When controlling for potential reciprocal relationships, vote choice, state economic judgments, personal economic evaluations, and party identification are all nonsignificant. The lack of a relationship between state and national economic evaluations suggests that people do not use state level judgments to influence their opinions of the

²It is possible that personal, state, and national economic perceptions are so intercorrelated that multicollinearity prevents any of the terms from obtaining significance. This possibility was tested informally by estimating the equation while excluding one or two of the economic variables. None of the economic variables obtain significance in the reduced equations.

³The vote choice variable is coded 1 if a person voted for Bush, 0 otherwise. Lumping Clinton and Perot voters may be biasing. To examine that possibility a parallel analysis was conducted comparing just Clinton and Bush supporters. The exclusion of Perot voters had no substantive impact; all variables have the same level of significance with the exception of family income which becomes significant at the $p < .05$ level.

nation's condition. That implies a direct relationship between state conditions and vote choice. Unfortunately, the vote choice equation provides no support for that conclusion either. Party identification also obtains nonsignificant results in the second column. A similar result was reported by Kinder et al. (1989, Table 4); with adequate controls, party affiliation has little or no influence on economic perceptions.

Kinder, Adams, and Gronke also find that personal economic evaluations do not influence national economic judgments. However, their research controlled for group economic perceptions. Chapter 3 demonstrated that personal and group economic evaluations, though distinct, are related to a limited degree. Thus, it is not surprising that when controlling for group evaluations personal economic perceptions do not obtain significance. The BEBR data do not offer usable measures of group economic judgments. Accordingly, one would expect that personal evaluations would become more significant, but they remain nonsignificant. Several possible explanations can be offered. First, personal economic perceptions are simply unrelated to national economic perceptions, regardless of the specific controls. Unfortunately the results presented below contradict such a conclusion. Second, prospective judgments are believed to be based, in part, upon the expected actions of the incoming administration. Given Clinton's emphasis on changing economic policy it is possible that the respondents see less of a relationship between their own condition and that

of the nation in the near future. This too is contradicted below.

Alternatively, it is possible that the results are caused by something unique to this election. The NES results analyzed below also contradict this explanation. The remaining explanations center upon the data itself. The survey may be biased, as suggested by the distribution of votes for Clinton and Bush. Or the results may be specific to Florida during the 1992 election. Unfortunately these explanations cannot be directly tested.

Columns three and four of Table 4-1 continue the pattern of non-significant results. Contrary to the working hypotheses change in county level employment has no significant influence upon how the respondents view the state's economy. Nor was their perception influenced by their own economic condition. Rather, the only influence on state economic evaluations is party identification. The county-wide context also has no influence upon personal economic perceptions. Only occupation and age have significant influences on personal perceptions and occupation is only marginal. The negative slope for age is expected given the tendency for the elderly to be more pessimistic about their economic prospects. In all, the BEBR data provide a consistent pattern of non-significant results. If clearer patterns emerge in the NES data, especially the 1992 data, the implication is that the BEBR data are somehow problematic.

Tables 4-2 to 4-4 provide similar analyses for the three NES datasets. Before examining these data, one modeling note must be addressed.

Equations 4-1 and 4-2 represent the equations 2-3 and 2-6 from chapter 2.

$$(4-1) \text{ National Econ} = \alpha + \beta_1 \text{ State Econ} + \beta_2 \text{ Group Econ} + \beta_3 \text{ Personal Econ} + \beta_4 \text{ Vote Choice} + \beta_5 \text{ Party Id.}$$

$$(4-2) \text{ State Econ}_{it} = \alpha + \beta_1 \text{ Personal Econ} + \beta_2 \text{ Unemployment} + \beta_3 \text{ Discussion} + \beta_4 \text{ High Interaction} + \beta_5 \text{ Low Interaction} + \beta_6 \text{ Party Id.}$$

None of the NES data contain usable measures of state economic perceptions and so equation 3-2 cannot be estimated. Additionally, the state economic perception coefficient in equation 4-1 cannot be estimated. However, it is possible to substitute the right hand portion of equation 4-2 for the state economic perception variable in equation 4-1. Obviously the substitution is not perfect; equation 4-2 does not perfectly estimate a person's perception of their state's economy. However, it is mathematically sound and makes it possible to incorporate the state's contextual information into the analysis of national economic judgments. The resulting equation, used with all three NES datasets, is:

$$(4-3) \text{ National Econ} = \alpha + \beta_1 \text{ Unemployment} + \beta_2 \text{ Discussion} + \beta_3 \text{ High Interaction} + \beta_4 \text{ Low Interaction} + \beta_5 \text{ Group Econ} + \beta_6 \text{ Personal Econ} + \beta_7 \text{ Vote Choice} + \beta_8 \text{ Party Id.}$$

Table 4-2 presents the results of the first NES analysis. It can be recalled from chapter 3 that four significant factors were found for 1984. Here they are modeled for their effect upon each other and vote choice. In this case, the first column does support traditional sociotropic research. Perceptions of the national economy are significantly and positively related to support for the incumbent. A connection between prospective

Table 4-2.
The Relationships between Economic Factors
and Vote Choice for 1984.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	3.553 (2.999)	.0883 (3.204)	—	—
Future Economic Perceptions ³	.0789 (.0502)	—	—	—	—
National Economic Perceptions ³	.2428** (.0631)	-.5675 (.5508)	—	—	—
Group Economic Perceptions ³	-.0184 (.0268)	-.3396 (.3664)	.9129* (.5364)	—	—
Personal Financial Conditions ³	.0880** (.0335)	1.031** (.3741)	-.3282 (.5284)	.0427 (.5495)	—
Change in Statewide Unemployment ⁴	1.061** (.4884)	—	-.2755 (.6626)	—	-.0330 (.6017)
Discuss Politics With Friends ⁴	-.0959 (.1506)	—	-.0298 (.0716)	—	-.1008 (.0654)
No Discussion * State Unemployment ⁴	-.5939** (.2551)	—	-.3587 (.4204)	—	-.2731 (.3249)
Discuss 4 Days or more * State Unemployment ⁴	-.2473 (.2843)	—	.5310 (.3444)	—	.3762* (.2204)
Party Identification ⁴	.8373** (.0906)	-.1859 (.4243)	-.1695 (.4249)	1.203** (.5020)	.8934** (.0829)
Self Placed Social Status ⁴	-.1311 (.0945)	—	—	.3891 (.2969)	.4634** (.1090)
Occupation ⁴	-.1938 (.1263)	—	—	.3568 (.2526)	.3009** (.1539)
Family Income ⁴	.0836** (.0288)	—	—	-.0008 (.0101)	.0031 (.0080)

Table 4-2-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0272** (.0105)	—	—	-.0484 (.0356)	-.0553** (.0115)
Race ⁴	-1.469** (.5338)	—	—	-.2282 (.4476)	.2873 (.3360)
Gender ⁴	.2276 (.3104)	—	—	-1.310** (.6600)	-.8443** (.3682)
South ⁴	1.315** (.3761)	—	—	-.3444 (.5820)	-.5073 (.4229)
(Constant)	-10.77** (1.800)	1.048 (3.716)	-1.452 (3.769)	17.48** (9.074)	16.43** (1.479)
N = 505	$\chi^2 < .0001$	Adj R ² = .05	Adj R ² = .13	Adj R ² = .23	Adj R ² = .23

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

evaluations and vote choice is not supported by the data. Were the factor measured well it would suggest that prospective evaluations may not have the same influence that MacKuen et al. (1992) suggest. For now though, such a conclusion should be only tentative. Moving down the column, past research receives more support. The lack of a direct relationship between group judgments and vote choice matches the results offered by Kinder et al. (1989). In addition, the standard sociotropic voting model is supported by the fact that although personal economic evaluations have a significant influence on vote choice the influence is smaller than that of national economic perceptions ($p < .01$).

Perhaps most interesting in this portion of the table is the influence of statewide employment and discussion. Everything else equal, people living in states in which unemployment went down prior to the election were more likely to vote for Reagan. This provides solid support for the idea that, at least during this election, the objective condition of the state influences the way people vote. Unfortunately it cannot be determined whether this relationship would remain significant in the presence of measures of state economic evaluations, though the BEBR data indicate that state perceptions and objective conditions are unrelated. Additionally, one of the interaction terms obtains significance. In this case, the term relates to people who did not discuss politics with their associates. The interpretation is that people who did not engage in political discussion are less likely to be influenced by

the state's economic condition. This result provides evidence in support of Mutz's hypothesis that discussion can influence the way in which people reach their vote decision. Unfortunately, the other interactive term is not significant which indicates that whatever the influence of the state's economy, it is not augmented by increased political discussion.

The remainder of Table 4-2 offers little in terms of significant results. Beginning with the second column, it is apparent that the only influence on prospective evaluations is personal economic conditions. The direct relationship between personal retrospective and national prospective evaluations contradicts one of the explanations offered for why personal economic conditions do not influence national judgments in Table 4-1. In terms of retrospective national economic conditions, the findings of Kinder et al. (1989) are partially replicated here. Group economic perceptions have only a marginally significant effect upon national perceptions when controlling for reciprocal effects. However, the vote choice variable does not obtain significance in Table 4-2 as it does in the research of Kinder et al.. Once again this may be due to differing control variables. Furthermore, none of the contextual or discussion variables influence national perceptions. Apparently the economic context, in this case the state economic condition, is directly related to vote choice and it is not mediated through traditional measures of economic perceptions. Treating group economic perceptions as a dependent variable also provides few significant results. Party

identification and gender are directly related to one's perception of the economic condition of their group with Republicans being more positive about their group's condition and women being more negative. Personal economic conditions show a similar pattern in terms of party and gender but also for social class, occupation, and age. Each of these are in the expected direction. In addition, one contextual variable is marginally significant. People who regularly engage in political discussion and live in more prosperous areas tend to be more positive about their personal financial condition. The positive slope is logical. The more discussion one engages in while residing in a positive economic context the more likely one will be exposed to positive economic information.

In all, Table 4-2 has a moderate fit to past research and the hypotheses presented. The lack of a relationship between most of the contextual variables and economic perceptions and the direct relationship between statewide employment and vote choice suggests that the local context influences vote decisions directly or through some variable not controlled for in the table. The failure of prospective evaluations to influence the vote is surprising, but may well be due to the weaknesses of the measurement items.

Table 4-3 offers the analysis for the 1988 NES data. The first column again reinforces past research in economic voting. Prospective, sociotropic, and pocketbook evaluations all influence vote choice with national concerns

Table 4-3.
The Relationships between Economic Factors
and Vote Choice for 1988.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ⁴	—	-1.305 (1.322)	3.779** (1.257)	—
Future Economic Perceptions ³	.0783* (.0425)	—	—	—
National Economic Perceptions ³	.1528** (.0447)	-.0112 (.2088)	—	—
Personal Financial Conditions ³	.0363* (.0210)	.2977** (.0757)	.2087** (.0535)	—
Change in Statewide Unemployment ⁴	-.0382 (.0405)	—	.0285 (.0334)	-.0872 (.0633)
Discuss Politics With Friends ⁴	-.0954 (.0609)	—	.1590** (.0527)	.2655** (.0938)
No Discussion * State Unemployment ⁴	-.0052 (.0192)	—	.0157 (.0165)	.0715** (.0308)
Discuss 4 Days or more * State Unemployment ⁴	.0123 (.0223)	—	-.0338* (.0178)	-.0187 (.0337)
Party Identification ⁴	.8288** (.0574)	.2204 (.1926)	-.1992 (.2037)	.4665** (.0747)
Self Placed Social Class ⁴	-.0295 (.0642)	—	—	.3157** (.0828)
Occupation ⁴	-.0688 (.0592)	—	—	-.0003 (.0016)
Family Income ⁴	.0253 (.0207)	—	—	.0108 (.0072)

Table 4-3-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0042 (.0070)	—	—	-.0833** (.0009)
Race ⁴	-1.866** (.4285)	—	—	.0356 (.5094)
Gender ⁴	.0647 (.2093)	—	—	-.6204** (.3139)
South ⁴	.7288** (.2382)	—	—	-.5574 (.3580)
(Constant)	-3.428** (1.139)	6.336** (1.727)	2.795* (1.683)	8.360** (.4034)
N= 898	$\chi^2 < .0001$	Adj R ² = .05	Adj R ² = .19	Adj R ² = .14

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 SLS Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Treated Endogenously in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

having the most weight. Partisan affiliation, race, and region influence vote choice as well. Unlike the 1984 results, the contextual variables have no significant influence on vote choice. Discussion, however, does evidence a significant effect on both national and personal economic evaluations. In both cases people who engage in more discussion tend to have a more positive perception of their condition as well as the nation's. Additionally, the interaction term representing lower levels of discussion and state employment has a significant and positive influence on national economic perceptions. The implication is that the state's economy matters with regard to personal conditions, but only for those who do not engage in higher levels of discussion. For both national and personal perceptions, whatever influence the state's economy has, it operates primarily through interpersonal communication. This supports Mutz's arguments (1992) and contradicts the results presented in Table 4-2.

Prospective evaluations are not well predicted by the instruments used here. Of those selected, only personal economic evaluations have any significant influence. The third column shows a similar relationship between personal and national economic evaluations. Those people perceiving their condition as improving view the nation's economy in the same light. Vote choice also has a positive influence on national economic perceptions. While controlling for reciprocal influence, those people voting for Bush were more favorably disposed toward the nation's economy. Finally, the differential

influence of party identification is repeated in this table. Party affiliation influences personal economic perceptions, but not national level judgments. Republicans are more likely than Democrats to feel positive about their own condition while both have similar views of the nation's economy.

Table 4-4 is the last table in this series. It presents the 1992 data analogous to the three preceding analyses. The first thing to notice is that prospective economic evaluations are not a significant influence on vote choice in the presence of retrospective economic controls. Sociotropic and pocketbook voting once more take precedence with pocketbook voting being the weaker of the two ($p < .01$). The precedence of national economic judgments is a consistent finding both within the literature and within this research. Mirroring the 1984 vote choice model, discussion is seen to have a positive influence on support for the President. However, for 1992 this probably does not reflect the idea that discussion reinforces what is being portrayed by the media. By contrast to 1984, the news was heavily negative during 1991 and 1992 and would have not encouraged support for Bush. It may be that discussion is correlated with support for Republicans given that higher educated individuals are most likely to engage in consistent political discussion. If so, that explanation does nothing to help us understand the non-significant results for the 1988 data. Additionally, neither state employment, nor any of the interaction terms reach levels of significance for vote choice or even for the three economic factors. Finally, one of the control

Table 4-4.
The Relationships between Economic Factors and Vote Choice for 1992.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	-.6041 (2.090)	-.02819 (2.146)	—
Future Economic Perceptions ³	.0290 (.0229)	—	—	—
National Economic Perceptions ³	.0917** (.0251)	.3117* (.1882)	—	—
Personal Financial Conditions ³	.0273* (.0141)	.2051** (.0941)	.3462** (.0635)	—
Change in Statewide Unemployment ⁴	-.0176 (.0293)	—	-.0192 (.0360)	.0864 (.0625)
Discuss Politics With Friends ⁴	.0821* (.0497)	—	.0326 (.0655)	-.1050 (.1057)
No Discussion * State Unemployment ⁴	-.0061 (.0178)	—	.0210 (.0219)	-.0560 (.0379)
Discuss 4 Days or more * State Unemployment ⁴	.0188 (.0139)	—	.0135 (.0177)	.0001 (.0300)
Party Identification ⁴	.8090** (.0558)	-.1074 (.3172)	.5551* (.3123)	.6500** (.0953)
Self Placed Social Class ⁴	-.0655 (.0570)	—	—	.7190** (.1128)
Occupation ⁴	-.1716** (.0797)	—	—	.0045** (.0023)
Family Income ⁴	.0153 (.0199)	—	—	.0006 (.0100)

Table 4-4-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0140** (.0061)	—	—	-.0689** (.0118)
Race ⁴	-.1573 (.3497)	—	—	.2289 (.6145)
Gender ⁴	.4165** (.1926)	—	—	-.4905* (.3834)
South ⁴	.3314* (.2025)	—	—	1.200** (.4346)
(Constant)	-5.694** (.9767)	8.327** (2.636)	2.674 (2.573)	21.29** (1.426)
N = 1062	$\chi^2 < .0001$	Adj R ² = .03	Adj R ² = .17	Adj R ² = .11

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 SLS Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regressions

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

variables has a slope opposite expectations. Occupation is negatively related to vote choice, suggesting that more professional, higher status, occupations opposed Bush.⁴

Looking at the results for the economic factors we find few surprises. Both personal and national retrospective evaluations influence prospective judgments. National conditions, though, are only marginally significant. Comparing this with Table 4-2 suggests that prospective judgments concerning the economy depend more on personal evaluations than on national ones. The measure of prospective evaluations is composed of both national and personal evaluations thereby raising questions as to exactly what is being measured. Those questions are only exacerbated by the results presented in chapter 3 suggesting that the combined prospective factor is influenced most by the sociotropic variable. For now the results must be seen as provisional at best.

Turning to the nation's economic situation we see that personal economic perceptions has a significant positive influence. This contradicts the findings in Table 4-1, and, given that both were conducted during the same electoral cycle, continues to raise questions regarding the validity of

⁴The vote choice variable is coded 1 if a person voted for Bush, 0 otherwise. Lumping Clinton and Perot voters may be biasing. To examine that possibility a parallel analysis was conducted comparing just Clinton and Bush supporters. The exclusion of Perot voters had no substantive impact; all variables have the same level of significance with the exception of race which, becomes significant at the $p < .05$ level, and personal economic conditions which drops from marginally significant to non-significant.

the results obtained using the BEBR data. Only party affiliation has any additional influence, though marginal, on national perceptions with Republicans perceiving the economy more positively than Democrats. The state's context and discussion produce no significant results. It is likely that the attention paid the condition of the economy in 1992 made discussion moot in terms of gathering information. A similar pattern can be seen in Table 4-2 in which discussion has no influence upon economic perceptions. On the other hand, the 1988 data do show significant influence for discussion during a time in which the economy was not the predominant issue. Finally, personal judgments also fail to evidence any relationship between economic perceptions and the economic context. Neither state level employment, discussion, nor the interactive terms has a significant influence on personal level judgments.

In all, Tables 4-1 to 4-4 suggest that contextual variables are inconsistently important. They do influence vote choice and economic perceptions, but only in certain situations. Understanding those situations and why they enable people to connect the context to their perceptions requires more detailed contextual analysis but should provide greater insight into opinion formation and decision making processes. The 1984 data suggest a direct relationship between the context and vote choice, while the other data show either indirect or no relationships. Partisanship is more closely related to personal perceptions than to national judgments, though

once again the advantage of a multi-election study shows that the relationships are not constant across elections. Finally, prospective economic evaluations provide limited results. In one of the three datasets analyzed prospective evaluations were not distinguishable from retrospective judgments. In 1984 and 1992 they fail to influence vote choice and only personal economic perceptions has any influence upon prospective judgments.

Subsample Analyses

Having examined voting models for the general public, we can now turn to looking at specific subsamples. The question addressed is simple but broad. Do different groups weight economic factors differently, or are their economic judgments based on different sources? Finally, are these differences systematic enough to imply a relationship? Random differences in model results are meaningless since they can be the result of many external causes. Rather, we are interested in differences that are consistent with each other across datasets and hopefully consistent with theoretical expectations. As noted throughout this research, it is hypothesized that those with the least education and interest will rely more heavily upon personal and retrospective economic evaluations as well as discussion with friends.

These results are presented in the remaining tables. Each table represents an analysis parallel to one of tables 4-2 to 4-4 but for a specific

subsample. By comparing the following tables both to each other and to the full samples it is possible to examine the specific influence of education and interest on economic voting.⁵ Because these tables should be read together I present the results of the paired tables together while occasionally referring to the full sample results for comparisons.

The first two tables for 1984 divide the sample on the basis of campaign attention. The question is how do these groups differ. First, compare the first columns in Tables 4-5 and 4-6. Clearly the two samples differ in their economic voting pattern. Most obvious is the fact that the high interest sample uses not only national and personal economic judgments, but prospective evaluations as well. By contrast, the low interest subsample shown in Table 4-5, utilizes only national economic evaluations. The sole reliance upon national rather than personal economic judgments contradicts the hypothesis that people with less information rely more heavily upon personal sources of information. Equally surprising is that fact that the coefficient for national economic evaluations is slightly, and significantly ($p < .01$), higher for the low interest subsample.⁶ Party

⁵The BEBR data is not broken into subsamples because the sample size is too small. Missing data, especially for the low education subsample, excludes too many cases to provide an adequate sample to analyze.

⁶Throughout this section, all significance tests referred to in the text are based upon the large sample confidence interval for two means. The two sample means compared are for the high and low interest or education sub-samples.

Table 4-5.
The Relationships between Economic Factors and Vote Choice for the
Low Campaign Interest Subsample for 1984.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	.5151 (.2897)	-.9919 (.2846)	—	—
Future Economic Perceptions ³	-.0315 (.0997)	—	—	—	—
National Economic Perceptions ³	.2930** (.1201)	-.2800 (.4075)	—	—	—
Group Economic Perceptions ³	.0220 (.0501)	-.2876 (.2531)	.5613** (.2725)	—	—
Personal Financial Conditions ³	.0835 (.0568)	.7890** (.2913)	.1434 (.2315)	.8981 (.7588)	—
Change in Statewide Unemployment ⁴	1.192 (.9473)	—	-.3133 (.6330)	—	.3453 (.7865)
Discuss Politics With Friends ⁴	-.1044 (.3063)	—	-.0555 (.0673)	—	-.0734 (.0848)
No Discussion * State Unemployment ⁴	-.7780* (.4586)	—	-.0555 (.6727)	—	-.1651 (.3788)
Discuss 4 Days or more * State Unemployment ⁴	.1614 (.5678)	—	.3457 (.2852)	—	.3281 (.3540)
Party Identification ⁴	.7686** (.1677)	.1159 (.4062)	.0010 (.3685)	.3755 (.5792)	.7304** (.1171)
Self Placed Social Status ⁴	-.1346 (.1690)	—	—	-.1721 (.4191)	.4745** (.1456)
Occupation ⁴	-.1477 (.2419)	—	—	.1789 (.4163)	.4640** (.2031)
Family Income ⁴	.0195 (.0553)	—	—	.0057 (.0146)	.0062 (.0121)

Table 4-5-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0258 (.0191)	—	—	.0083 (.0451)	-.0504** (.0156)
Race ⁴	-1.473 (.9230)	—	—	-.0556 (.5373)	.2448 (.4208)
Gender ⁴	.9564 (.6032)	—	—	-1.330** (.6585)	-.4699 (.4852)
South ⁴	1.611** (.7079)	—	—	.7419 (.7791)	-.5928 (.5549)
(Constant)	-11.62** (3.337)	4.895 (3.520)	.2699 (3.203)	5.489 (11.58)	14.22** (1.881)
N = 150	$\chi^2 < .0001$	Adj R ² = .05	Adj R ² = .18	Adj R ² = .20	Adj R ² = .19

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

Table 4-6.
The Relationships between Economic Factors and Vote Choice for the
High Campaign Interest Subsample for 1984.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	.5122 (.2602)	3.607* (1.882)	—	—
Future Economic Perceptions ³	.2293** (.0911)	—	—	—	—
National Economic Perceptions ³	.2623** (.1080)	.1418 (.3907)	—	—	—
Group Economic Perceptions ³	-.0290 (.0490)	-.2726 (.2193)	.2712 (.1963)	—	—
Personal Financial Conditions ³	.1139** (.0660)	.6645** (.2859)	-.2251 (.2285)	.6361 (.4893)	—
Change in Statewide Unemployment ⁴	1.831 (1.170)	—	-.7225 (.6413)	—	-.3979 (1.050)
Discuss Politics With Friends ⁴	-.4772* (.2687)	—	-.0557 (.0599)	—	-.1743* (.1049)
No Discussion * State Unemployment ⁴	-1.672* (.6796)	—	.8381** (.4048)	—	-.6008 (.6738)
Discuss 4 Days or more * State Unemployment ⁴	-.0466 (.4670)	—	.1945 (.2091)	—	.4117 (.2967)
Party Identification ⁴	1.209** (.2098)	.0754 (.4114)	-.3455 (.3297)	.7875 (.5254)	1.042** (.1207)
Self Placed Social Status ⁴	-.1388 (.1710)	—	—	.2712 (.2706)	.3931** (.1715)
Occupation ⁴	-.4107* (.2359)	—	—	.0624 (.2600)	.0797 (.2385)
Family Income ⁴	.1693** (.0536)	—	—	-.0102 (.0119)	.0005 (.0111)

Table 4-6-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0666** (.0220)	—	—	-.0257 (.0392)	-.0651** (.0174)
Race ⁴	-.7546 (.8820)	—	—	-.9618 (.6094)	.1347 (.5647)
Gender ⁴	.0365 (.5458)	—	—	-.0756 (.9107)	-1.389** (.5798)
South ⁴	1.562** (.6819)	—	—	-1.000 (.7339)	-.3992 (.6693)
(Constant)	-12.47** (3.353)	2.053 (3.443)	-3.958 (2.885)	5.938 (9.084)	20.06** (2.442)
N = 222	$\chi^2 < .0001$	Adj R ² = .14	Adj R ² = .40	Adj R ² = .35	Adj R ² = .26

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

identification also evidences a larger difference ($p < .01$). Again the direction of the difference runs counter to the hypothesized direction with the high interest subsample making greater use of partisanship. Finally, the contextual variables also appear to have greater influence on the high interest subsample's vote choice. Two of the contextual terms are significant, discussion and the low discussion interaction term. Both, however, are negative. For the discussion variable this suggests that talking with friends made people less likely to support Reagan. In terms of the interaction variable, the interpretation is that people living in more prosperous states but did not engage in discussion were less likely to support Reagan; without the interpersonal discussion, the influence of economic context is limited.

The determinants of economic perceptions are more consistent across the two subsamples. For both the high and low interest groups, the only predictor of prospective evaluations is personal economic evaluations. Again, contrary to the hypotheses, the high interest subsample has the largest coefficient ($p < .01$). The determinants of national economic perceptions also differ by levels of interest. For the high interest group vote choice and the low discussion interaction term are the only significant predictors of national economic perceptions. The positive slope for the interaction suggests that only people who did not engage in discussion were influenced by the level of employment in their state; interpersonal

communication itself did not increase the use of contextual information. Those reporting that they voted for Reagan are more positive in their evaluation of the nation's economy. For low interest subsample, only group economic perceptions influence national economic judgments. Together the two differences for national evaluations suggests that those with less interest draw more heavily upon the social context for national economic information while more interested individuals draw more heavily upon political preferences. No pattern exists with regard to the determinants of group perceptions. The sole significant political variable in Table 4-2, party identification, is non-significant in both halves of the sample. Finally, personal economic perceptions shows little support for any of the hypotheses under investigation. The influence of the state's context is minimal in both subsamples. Only once, with the high interest group, does a contextual variable obtain significance. Discussion is negatively associated with personal economic perceptions; the more a person talks about politics with friends the less positive he or she feels about their personal financial condition. The positive influence of high levels of discussion and the state context seen in Table 4-2 disappears for the two subsamples.

Tables 4-7 and 4-8 repeat the two prior tables but are split by levels of education. As with interest, the higher education group shows a greater use of prospective evaluations. This pattern is clear, and interesting given

Table 4-7.
The Relationships between Economic Factors and Vote Choice for the
Low Education Subsample for 1984.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	1.189 (1.972)	2.224 (2.321)	—	—
Future Economic Perceptions ³	-.1219 (.0948)	—	—	—	—
National Economic Perceptions ³	.3270** (.1097)	.0435 (.3262)	—	—	—
Group Economic Perceptions ³	-.0883* (.0520)	.2643 (.2669)	-.1421 (.3879)	—	—
Personal Financial Conditions ³	.2486** (.0761)	.3487 (.2557)	.3569* (.1975)	.8229 (.6925)	—
Change in Statewide Unemployment ⁴	1.802** (.8659)	—	.0613 (.5883)	—	.1852 (.8754)
Discuss Politics With Friends ⁴	.2117 (.2621)	—	-.0111 (.0658)	—	-.1365 (.0932)
No Discussion * State Unemployment ⁴	-.5312 (.3623)	—	-.0867 (.4701)	—	-.1741 (.4341)
Discuss 4 Days or more * State Unemployment ⁴	-.8438 (.5678)	—	.1849 (.2249)	—	.1275 (.3566)
Party Identification ⁴	.9345** (.1587)	-.4774 (.3583)	.2484 (.3569)	.5713 (.6042)	.8414** (.1257)
Self Placed Social Status ⁴	-.3017* (.1831)	—	—	-.3258 (.3385)	.3996** (.1656)
Occupation ⁴	.3863 (.2646)	—	—	.1361 (.2868)	.1966 (.2404)
Family Income ⁴	-.0648 (.0570)	—	—	-.0148 (.0163)	.0135 (.0143)

Table 4-7-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0133 (.0163)	—	—	.0024 (.0270)	-.0265* (.0161)
Race ⁴	-3.107** (1.186)	—	—	-.1522 (.4646)	-.1079 (.4265)
Gender ⁴	-.2652 (.6348)	—	—	.2378 (.7107)	-.4636 (.5854)
South ⁴	1.513** (.6205)	—	—	.3660 (.6454)	.1865 (.5839)
(Constant)	-13.24** (3.330)	-1.847 (4.020)	3.084 (4.871)	5.120 (9.669)	14.00** (2.126)
N = 208	$\chi^2 < .0001$	Adj R ² = .07	Adj R ² = .25	Adj R ² = .22	Adj R ² = .16

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

Table 4-8.
The Relationships between Economic Factors and Vote Choice for the
High Education Subsample for 1984.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	3.521 (4.290)	2.123 (2.646)	—	—
Future Economic Perceptions ³	.1670** (.0669)	—	—	—	—
National Economic Perceptions ³	.2088** (.0862)	.1697 (.7688)	—	—	—
Group Economic Perceptions ³	.0022 (.0360)	-.4753 (.2628)	.3841** (.1825)	—	—
Personal Financial Conditions ³	.0474 (.0446)	.6841** (.3769)	.0345 (.2505)	.0921 (.5902)	—
Change in Statewide Unemployment ⁴	.9486 (.7166)	—	-.6185 (.5375)	—	.2243 (.8778)
Discuss Politics With Friends ⁴	-.3101 (.2053)	—	-.0371 (.0569)	—	-.0582 (.0923)
No Discussion * State Unemployment ⁴	-.7911* (.4154)	—	.2189 (.3113)	—	-.4585 (.5084)
Discuss 4 Days or more * State Unemployment ⁴	.1387 (.3603)	—	.3464 (.2236)	—	.4982* (.2842)
Party Identification ⁴	.9866** (.1386)	-.1870 (.6171)	-.1401 (.4338)	1.139** (.5624)	.9280** (.1116)
Self Placed Social Status ⁴	-.1193 (.1349)	—	—	.6739** (.3329)	.4383** (.1532)
Occupation ⁴	-.3501** (.1823)	—	—	.3593 (.3424)	.3045 (.2388)
Family Income ⁴	.1347** (.0391)	—	—	.0045 (.0133)	-.0021 (.0107)

Table 4-8-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Group Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0305* (.0180)	—	—	-.0759 (.0541)	-.0828** (.0177)
Race ⁴	-.7859 (.6413)	—	—	-.4881 (.8552)	.8669 (.5506)
Gender ⁴	.1173 (.4068)	—	—	-1.805** (.8342)	-.9069* (.4937)
South ⁴	1.263** (.5653)	—	—	-1.210 (.9899)	-1.165* (.6347)
(Constant)	-9.683** (2.388)	.8676 (5.079)	1.353 (3.956)	16.72 (11.37)	18.41** (2.173)
N = 297	$\chi^2 < .0001$	Adj R ² = .08	Adj R ² = .29	Adj R ² = .25	Adj R ² = .21

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

the fact that neither education nor interest demonstrated any influence over the discrimination between prospective and retrospective evaluations. In contrast, the coefficient for personal perceptions is significantly larger for the lower the education subsample ($p < .01$). Perhaps most importantly, the state economic context is significantly related to vote choice for those with less education and non-significant for those with more education. Despite this support, two coefficients contradict the hypotheses being tested. The low education subsample has a larger coefficient for national economic perceptions and a smaller one for party identification. Finally, the high education subsample shows a significant negative relationship between the no discussion interaction term and the state's employment while none of the interaction terms are significant for the other subsample.

Turning to the economic variables we see first that the high education subsample has one significant predictor of prospective evaluations; personal financial conditions. Thus, personal economic conditions indirectly influenced the vote choice of the higher education subsample while directly influencing the vote of the lower education group. No other variables influence prospective evaluations. National perceptions offer a bigger surprise. In Table 4-5 it can be seen that group economic evaluations influence national judgments for the low interest group. When the samples are split by education that pattern is reversed. Group evaluations influence national perceptions for the more highly educated subsample. The lower

educated subsample relies upon more heavily upon personal financial conditions to influence national perceptions. Such a pattern fits more logically within the findings of past research. Group economic evaluations, being more ambiguous and less clearly defined, are more difficult to utilize because of information costs. Personal evaluations, by contrast, have much lower information costs. Why the pattern is reversed for the subsamples split by interest is unclear. Finally, the only major difference between the half samples is the fact that party affiliation influences group economic perceptions for the high education group and has a larger coefficient for personal perceptions. Again this implies a greater degree of politicization for the high resource groups, but the pattern is not consistent.

In all, the 1984 data provide some evidence supporting the hypotheses presented above. I can now examine whether the pattern differs across datasets. Tables 4-9 and 4-10 present the results from the 1988 data. Looking at the relationship between national economic perceptions and vote choice we see some clear differences. The low interest subsample shows no evidence of engaging in economic voting. On the other hand, the high interest group has a significant influence for all three economic factors with prospective evaluations predominating. In addition, party identification is weighted more heavily ($p < .01$) for the high interest sample. Neither Table 4-9 nor 4-10 show any influence on the part of contextual variables.

Table 4-9.
The Relationships between Economic Factors and Vote Choice for
the Low Campaign Attention Subsample for 1988.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	-.5163 (1.348)	1.816 (1.118)	—
Future Economic Perceptions ³	.0456 (.0917)	—	—	—
National Economic Perceptions ³	.0820 (.0990)	-.0648 (.2700)	—	—
Personal Financial Conditions ³	.0802 (.0496)	.3581** (.1010)	.2191** (.0660)	—
Change in Statewide Unemployment ⁴	.0356 (.0840)	—	.0216 (.0357)	-.0814 (.0733)
Discuss Politics With Friends ⁴	.0365 (.1287)	—	.1139* (.0665)	.3759** (.1233)
No Discussion * State Unemployment ⁴	.0107 (.0436)	—	.0017 (.0172)	.0815** (.0341)
Discuss 4 Days or more * State Unemployment ⁴	-.0278 (.0444)	—	-.0238 (.0220)	-.0178 (.0443)
Party Identification ⁴	.9150** (.1205)	.0520 (.2115)	-.0808 (.1810)	.4542** (.0918)
Self Placed Social Class ⁴	.0424 (.1256)	—	—	.2668** (.0991)
Occupation ⁴	-.1831 (.1393)	—	—	.0012 (.0024)
Family Income ⁴	.0241 (.0457)	—	—	.0154* (.0086)

Table 4-9-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	-.0181 (.0138)	—	—	-.0744** (.0114)
Race ⁴	-2.235* (1.166)	—	—	.6071 (.6131)
Gender ⁴	.4582 (.4224)	—	—	-.1808 (.3755)
South ⁴	.5623 (.5068)	—	—	.1075 (.4396)
(Constant)	-3.527 (2.517)	5.061** (2.374)	5.103** (1.743)	18.35** (1.356)
N = 388	$\chi^2 = < .0001$	Adj R ² = .03	Adj R ² = .18	Adj R ² = .11

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

Table 4-10.
The Relationships between Economic Factors and Vote Choice for
the High Campaign Attention Subsample for 1988.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	-2.468 (2.038)	8.664** (3.483)	—
Future Economic Perceptions ³	.2150** (.0995)	—	—	—
National Economic Perceptions ³	.1884* (.0974)	.0771 (.2429)	—	—
Personal Financial Conditions ³	.0699* (.0470)	.1151 (.0786)	.1454 (.0926)	—
Change in Statewide Unemployment ⁴	-.0517 (.1071)	—	.0275 (.0947)	-.1308 (.1392)
Discuss Politics With Friends ⁴	-.1633 (.1279)	—	.3082** (.1199)	.0027 (.1717)
No Discussion * State Unemployment ⁴	-.0194 (.0547)	—	.0803 (.0563)	.0015 (.0827)
Discuss 4 Days or more * State Unemployment ⁴	-.0175 (.0477)	—	-.0452 (.0405)	.0266 (.0593)
Party Identification ⁴	1.302** (.1765)	.5718** (.2898)	-.9599 (.5904)	.5171** (.1305)
Self Placed Social Class ⁴	.0795 (.1664)	—	—	.3695** (.1546)
Occupation ⁴	-.2729* (.1474)	—	—	-.0011 (.0021)
Family Income ⁴	.0266 (.0493)	—	—	-.0006 (.0134)

Table 4-10-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0302* (.0168)	—	—	-.0962** (.0174)
Race ⁴	-.5858 (.7813)	—	—	-1.000 (.9301)
Gender ⁴	-.9927* (.5148)	—	—	-1.662** (.5796)
South ⁴	1.328** (.5597)	—	—	-1.602** (.6257)
(Constant)	-6.960** (2.833)	9.659** (2.098)	-2.556 (4.234)	26.04** (2.162)
N = 274	$\chi^2 < .0001$	Adj R ² = .07	Adj R ² = .17	Adj R ² = .22

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 SLS Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

The remainder of the two tables continues that pattern. Prospective evaluations are influenced by pocketbook concerns for the low interest sample, but not for the high interest group who use partisanship more heavily. National economic judgments are also more heavily influenced by personal concerns for the low interest sample while national judgments are more strongly influenced by discussion and vote choice for the high interest sample ($p < .01$). For the low interest sample, personal economic evaluations are influence by discussion and the low discussion interaction term as well as partisanship and self placed social class. Party affiliation and social class, however, play a larger role for the high interest sample ($p < .01$). In all, Tables 4-9 and 4-10 suggest that those who pay less attention to the media will rely more upon personal information in their voting decision, and may not use any economic information.

The same basic patterns are repeated for Tables 4-11 and 4-12. The low education subsample shows no relationship between vote choice and national economic perceptions, but the high education subsample has a significant relationship. The reverse is true for pocketbook voting; personal conditions play a significant, though moderate, role in the decisions of the lower educated group but no role for the more highly educated respondents. Once again, partisanship plays a significantly larger role for those with more education ($p < .01$), though party identification is significant for both groups. The contextual variables are all non-significant.

Table 4-11.
The Relationships between Economic Factors and Vote Choice for
the Low Education Subsample for 1988.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	-1.745 (1.264)	2.003 (1.275)	—
Future Economic Perceptions ³	.0948 (.0627)	—	—	—
National Economic Perceptions ³	.1012 (.0633)	-.1628 (.2317)	—	—
Personal Financial Conditions ³	.0710** (.0325)	.4095** (.1211)	.2116** (.0932)	—
Change in Statewide Unemployment ⁴	-.0638 (.0605)	—	.0009 (.0478)	-.1080 (.0909)
Discuss Politics With Friends ⁴	-.0823 (.0881)	—	.2234** (.0744)	.2508* (.1393)
No Discussion * State Unemployment ⁴	.0034 (.0250)	—	.0289 (.0212)	.0728* (.0389)
Discuss 4 Days or more * State Unemployment ⁴	-.0014 (.0353)	—	-.0406 (.0271)	-.0221 (.0524)
Party Identification ⁴	.7230** (.0797)	.1775 (.2008)	-.0004 (.2047)	.5564** (.1105)
Self Placed Social Class ⁴	-.1166 (.0977)	—	—	.1853 (.1169)
Occupation ⁴	-.0495 (.0953)	—	—	-.0009 (.0028)
Family Income ⁴	.0276 (.0296)	—	—	.0127 (.0098)

Table 4-11-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0008 (.0092)	—	—	-.0647** (.0127)
Race ⁴	-2.524** (.6779)	—	—	.4781 (.6949)
Gender ⁴	.2784 (.3172)	—	—	-.5872 (.4616)
South ⁴	.9563** (.3529)	—	—	-.2035 (.5223)
(Constant)	-2.340 (1.636)	6.770** (2.436)	4.664** (2.253)	19.44** (1.581)
N = 388	$\chi^2 < .0001$	Adj R ² = .04	Adj R ² = .15	Adj R ² = .11

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

Table 4-12.
The Relationships between Economic Factors and Vote Choice for
the High Education Subsample for 1988.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	-5.529 (4.008)	7.814** (2.839)	—
Future Economic Perceptions	.0737 (.0623)	—	—	—
National Economic Perceptions ³	.2307** (.0700)	.5253 (.4008)	—	—
Personal Financial Conditions ³	.0040 (.0301)	.0533 (.1016)	.1361* (.0833)	—
Change in Statewide Unemployment ⁴	-.0276 (.0620)	—	.0445 (.0578)	-.1129 (.0927)
Discuss Politics With Friends ⁴	-.0374 (.0915)	—	.1072 (.0900)	.3124** (.1356)
No Discussion * State Unemployment ⁴	.0049 (.0352)	—	-.0014 (.0368)	.1318** (.0575)
Discuss 4 Days or more * State Unemployment ⁴	.0095 (.0315)	—	-.0302 (.0292)	-.0276 (.0461)
Party Identification ⁴	.9481** (.0877)	.8069 (.5399)	-.8019* (.4729)	.3842** (.1035)
Self Placed Social Class ⁴	.0655 (.1003)	—	—	.4147** (.1289)
Occupation ⁴	-.0914 (.0938)	—	—	.0002 (.0020)
Family Income ⁴	.0218 (.0323)	—	—	.0102 (.0108)

Table 4-12-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0062 (.0121)	—	—	-.1024** (.0150)
Race ⁴	-1.491** (.6133)	—	—	-.3897 (.7635)
Gender ⁴	-.1565 (.2985)	—	—	-.6223 (.4352)
South ⁴	.5076 (.3482)	—	—	-.9004* (.5023)
(Constant)	-4.899** (1.782)	9.082** (2.924)	.1472 (3.091)	21.41** (1.665)
N = 496	$\chi^2 < .0001$	Adj R ² = .02	Adj R ² = .15	Adj R ² = .12

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regression analyses.

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

The determinants of the economic variables have roughly the same pattern based upon education as they do for interest. The low education subsample has a significant and large coefficient for the influence of personal perceptions upon prospective evaluations while the higher education group shows no relationship. Departing from the Table 4-10, partisan identification has no influence on prospective evaluations for the high interest sample. National economic perceptions are influenced by pocketbook concerns and discussion for the low education sample. The higher education group, however, draws less upon personal evaluations and more partisan affiliation ($p < .01$). The negative slope for partisan identification in Table 4-12 is surprising, but marginally significant. In all, as with Tables 4-9 and 4-10, the higher resource groups rely more heavily upon national level information and partisanship when making their voting decisions.

Similar, though not completely parallel, results are obtained for the 1992 data. First compare Tables 4-13 and 4-14. The most interesting fact is that the high interest subsample once again shows a significant relationship between prospective evaluations and vote choice while the low interest group does not. Both groups show marginally significant sociotropic voting but, consistent with the hypothesis, the high interest subsample's coefficient is larger ($p < .01$). Partisanship, however, shows the reverse pattern with low interest respondents having a larger coefficient for vote choice than the

Table 4-13.

The Relationships between Economic Factors and Vote Choice for the
Lowest Quartile of Campaign Interest for 1992.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	-.0850 (2.255)	-.9751 (2.207)	—
Future Economic Perceptions ³	.0584 (.0429)	—	—	—
National Economic Perceptions ³	.0767* (.0465)	.3028 (.2154)	—	—
Personal Financial Conditions ³	.0111 (.0285)	.3336** (.1325)	.4320** (.0922)	—
Change in Statewide Unemployment ⁴	-.0767 (.0597)	—	-.0244 (.0432)	.0422 (.0702)
Discuss Politics With Friends ⁴	-.0687 (.1048)	—	.0852 (.0801)	-.1464 (.1263)
No Discussion * State Unemployment ⁴	.0507 (.0437)	—	.0076 (.0254)	-.0244 (.0414)
Discuss 4 Days or more * State Unemployment ⁴	.0172 (.0274)	—	.0299 (.0221)	-.0041 (.0352)
Party Identification ⁴	.9724** (.1151)	-.2553 (.3529)	.5379* (.3274)	.6608** (.1139)
Self Placed Social ⁴ Class	-.2667** (.1146)	—	—	.6621** (.1293)
Occupation ⁴	-.1630** (.1627)	—	—	.0059** (.0027)
Family Income ⁴	.0277 (.0412)	—	—	-.0008 (.0115)

Table 4-13-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0184 (.0118)	—	—	-.0518** (.0140)
Race ⁴	-.2239 (.6861)	—	—	.1989 (.7173)
Gender ⁴	.6262* (.3548)	—	—	-.4148 (.4387)
South ⁴	.1623 (.3907)	—	—	.8285* (.5053)
(Constant)	-4.916** (1.994)	5.026 (3.167)	1.514 (3.032)	21.19** (1.650)
N = 316	$\chi^2 < .0001$	Adj R ² = .03	Adj R ² = .14	Adj R ² = .09

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regressions

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

Table 4-14.
The Relationships between Economic Factors and Vote Choice for the
Highest Quartile of Campaign Interest for 1992.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	.0180 (4.505)	13.73* (8.420)	—
Future Economic Perceptions ³	.1148** (.0490)	—	—	—
National Economic Perceptions ³	.0965* (.0531)	.2558 (.2874)	—	—
Personal Financial Conditions ³	.0168 (.0291)	.0007 (.1083)	.2949** (.1393)	—
Change in Statewide Unemployment ⁴	-.0181 (.0727)	—	-.0384 (.1208)	.2353* (.1444)
Discuss Politics With Friends ⁴	.1161 (.1046)	—	-.2499 (.2264)	.0419 (.2071)
No Discussion * State Unemployment ⁴	.0006 (.0496)	—	.0729 (.0800)	-.1634* (.0953)
Discuss 4 Days or more * State Unemployment ⁴	.0195 (.0282)	—	-.0342 (.0481)	.0051 (.0593)
Party Identification ⁴	.8463** (.1168)	-.0321 (.5561)	-1.258 (1.224)	.6118** (.1774)
Self Placed Social Class ⁴	-.1319 (.1211)	—	—	.8487** (.2358)
Occupation ⁴	-.1629 (.1798)	—	—	.0006 (.0041)
Family Income ⁴	-.0091 (.0416)	—	—	.0019 (.0208)

Table 4-14-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0051 (.0122)	—	—	-.1006** (.0240)
Race ⁴	.2506 (.6207)	—	—	.1170 (1.209)
Gender ⁴	.1763 (.4305)	—	—	-.6973 (.8000)
South ⁴	.0378 (.4142)	—	—	1.987** (.8767)
(Constant)	-5.391** (1.954)	12.88** (4.326)	-9.245 (9.161)	21.08** (2.930)
N = 275	$\chi^2 < .0001$	Adj R ² = .01	Adj R ² = .12	Adj R ² = .14

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regressions

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

high interest subsample ($p < .01$). In neither subsample do personal economic perceptions or contextual variables directly influence vote choice. Personal economic perceptions do, however, indirectly influence vote choice. In the low interest subsample personal perceptions influence both prospective and national retrospective evaluations. In contrast, personal economic judgments influence only national evaluations in the high interest sample. Furthermore, the coefficients for personal financial conditions are significantly larger for the low interest subsample ($p < .01$) indicating a stronger indirect influence. In only two instances do contextual variables obtain significance. Each case is seen in the final column of Table 4-14. The local economic context and the low discussion interaction term are both significant. Taken together they suggest that the level of state employment influences personal perceptions and that this influence is not mediated through interpersonal communication. Finally, party identification influences personal economic perceptions for both subsamples, but once again the pattern seen for 1988 is reversed. Those with less interest have larger coefficients suggesting a greater reliance upon political information. Why the pattern for partisanship differs in 1992 is unclear, but may be due the unusual disagreement over how strong the economy actually was in 1992.

Tables 4-15 and 4-16 complete the analyses presented here. The results from splitting the 1992 sample by education replicate the major results obtained by splitting the sample based upon interest. Vote choice is

influenced by national economic perceptions for both samples, but once again the coefficient is larger for the high resource group ($p < .01$). However, unlike the low interest subsample those with less education do show signs of pocketbook voting. Personal economic perceptions have a significant effect upon vote choice. Although the magnitude of the effect is smaller than is found in other datasets, it is significantly larger than the same coefficient for the high education subsample ($p < .01$). Party identification represents the most important departure from two prior tables. The less educated respondents rely less upon partisan attachment than do those with more education ($p < .01$). This result more closely conforms to the results presented for the other datasets, but it is the opposite of the relationship that was hypothesized. Supporting the idea that the lower education subsample relies less upon political information is the positive influence of discussion. For those with fewer cognitive resources, interpersonal contact has more influence than it does for those with more resources.

The remaining portions of Tables 4-15 and 4-16 continue to support the hypothesis that those with more resources rely less upon personal level information. Personal economic perceptions influence both prospective and retrospective evaluations for each subsample. In each case the coefficient for personal judgments is larger for the low education sample ($p < .01$). Finally, the determinants of personal perceptions should be addressed. Party identification, as with vote choice, has more influence for those with

Table 4-15.
The Relationships between Economic Factors and Vote Choice for the
Lowest Quartile of Education for 1992.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	.3474 (2.287)	-.7943 (2.161)	—
Future Economic Perceptions ³	-.0327 (.0387)	—	—	—
National Economic Perceptions ³	.0832* (.0431)	.0078 (.4427)	—	—
Personal Financial Conditions ³	.0565** (.0263)	.4082* (.2133)	.3653** (.1132)	—
Change in Statewide Unemployment ⁴	-.0248 (.0548)	—	-.0421 (.0572)	.0767 (.0931)
Discuss Politics With Friends ⁴	.1809** (.0897)	—	-.0497 (.0981)	-.1635 (.1546)
No Discussion * State Unemployment ⁴	.0095 (.0349)	—	.0119 (.0339)	-.0239 (.0550)
Discuss 4 Days or more * State Unemployment ⁴	.0122 (.0288)	—	.0275 (.0287)	.0011 (.0464)
Party Identification ⁴	.8050** (.0950)	-.1258 (.4009)	.5991** (.2931)	.6724** (.1424)
Self Placed Social ⁴ Class	-.0185 (.0996)	—	—	.6940** (.1799)
Occupation ⁴	-.2761** (.1416)	—	—	.0088* (.0046)
Family Income ⁴	-.0136 (.0317)	—	—	.0039 (.0132)

Table 4-15-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0146 (.0098)	—	—	-.0403** (.0166)
Race ⁴	-1.807** (.8093)	—	—	.0804 (.9233)
Gender ⁴	1.407** (.3841)	—	—	.0558 (.5713)
South ⁴	.8574** (.3590)	—	—	1.914** (.6583)
(Constant)	-6.911** (2.109)	6.161** (3.130)	2.805 (2.952)	20.65** (2.150)
N = 413	$\chi^2 < .0001$	Adj R ² = .03	Adj R ² = .16	Adj R ² = .09

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regressions

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

Table 4-16
The Relationships between Economic Factors and Vote Choice for the
Highest Quartile of Education for 1992.

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Vote Choice ³	—	.7529 (3.018)	2.085 (3.354)	—
Future Economic Perceptions ³	.0263 (.0312)	—	—	—
National Economic Perceptions ³	.1312** (.0347)	.2298 (.1598)	—	—
Personal Financial Conditions ³	.0099 (.0181)	.2829** (.0944)	.3320** (.0782)	—
Change in Statewide Unemployment ⁴	-.0097 (.0389)	—	-.0040 (.0462)	.0910 (.0849)
Discuss Politics With Friends ⁴	.0543 (.0652)	—	.0463 (.0915)	-.0397 (.1458)
No Discussion * State Unemployment ⁴	-.0157 (.0234)	—	.0357 (.0301)	-.0864* (.0521)
Discuss 4 Days or more * State Unemployment ⁴	.0149 (.0177)	—	.0026 (.0231)	.0037 (.0400)
Party Identification ⁴	.8663** (.0760)	-.3009 (.4652)	.2274 (.5020)	.6550** (.1303)
Self Placed Social Class	-.1033 (.0786)	—	—	.7219** (.1593)
Occupation ⁴	-.1551 (.1249)	—	—	.0036 (.0027)
Family Income ⁴	.0369 (.0290)	—	—	.0032 (.0154)

Table 4-16-- Continued

	Vote Choice ¹	Future Economic Perceptions ²	National Economic Perceptions ²	Personal Financial Conditions ²
Age ⁴	.0114 (.0087)	—	—	-.0992** (.0184)
Race ⁴	.5469 (.4534)	—	—	.1268 (.8358)
Gender ⁴	.0007 (.2449)	—	—	-.9064* (.5205)
South ⁴	-.0357 (.2593)	—	—	.6919 (.5890)
(Constant)	-5.295** (1.260)	6.121* (3.663)	1.027 (3.710)	21.42** (1.935)
N = 627	$\chi^2 < .0001$	Adj R ² = .03	Adj R ² = .17	Adj R ² = .10

¹ Coefficients are from Logistic Regression. Standard Errors are in Parentheses.

² Parameter Estimates from 2 Stage Least Squares Regression. Standard Errors are in Parentheses.

³ Treated Endogenously in 2 SLS regression analyses.

⁴ Used as an Instrument in 2 SLS regressions

* = P < .10 ** = P < .05

Note: Vote choice is coded 0=Other, 1=Republican. All economic perception variables are coded low to high. Income is coded by categories low to high. Change in employment is actual % increase in employment. Discuss is coded as actual number of days of discussion. Occupational categories are coded low to high. Self placed social class is coded low to high. Race is coded 1=White, 2=Black. Gender is coded 1=Male, 2=Female, Age is coded as actual years. South is 0=Nonsouth, 1=South.

more resources. This has been the most common pattern in this research but it runs contrary to the hypothesized relationship. In addition, the low discussion interaction term is significant and negative for the high education subsample. This implies that engaging in limited political discussion makes the economic context less influential. In other words, information that is not transmitted by interpersonal contact is not well utilized. Such an interpretation again runs counter to the hypothesis regarding the influence of the economic context. Once again the contextual variables are the most inconsistent while the economic variables display a fairly clear pattern.

Chapter 5 briefly examines the primary results and the discussions some of their implications. But this chapter can be quickly summarized here. The hypothesis that cognitive resources influences the type of economic judgments made and how they are used is supported. Specifically, those people with greater cognitive resources rely more heavily upon prospective and national economic perceptions. In some instances the pattern fails, but the general trend is clear. The hypotheses that contextual factors influence vote choice receive inconsistent support. No pattern, for or against, can be found. More refined and detailed measures will almost certainly be required to obtain consistent results.

CHAPTER 5 CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

As with most research the analyses presented above contain a mixture of success and failure. Some hypotheses are supported while others, in this case a majority, are not. However, when the theoretical foundations are sound "null" findings are interesting if only because they contradict the theories used to derive the hypotheses. With that in mind, I turn to a brief summary of the results of this research along with suggestions for future efforts.

The goal of chapter 3 was to determine the extent to which cognitive resources influence the structure of economic attitudes. Past research has suggested that education and attention to political campaigns are both indicators of cognitive resources. The former represents the resources available to the individual while the latter represents the resources devoted to politics. I hypothesized that people with fewer resources would not discriminate between economic spheres as well as people with more resources. The results were consistently contrary to the hypothesis. The first section of the chapter clearly demonstrates that people discriminate equally well across resource levels. Given that past research has shown a strong relationship between ideology and cognitive resources the question focuses upon what makes economic attitudes different.

Two explanations are immediately apparent. The prospective economic items may have been biasing in the NES data. MacKuen and Mouw suggest that a fundamental distinction between the "peasants" and "bankers" is that bankers tend to favor prospective evaluations. The prospective item used throughout the NES analyses combines two different economic referents-- one's personal condition and that of the national economy. As suggested earlier, the more informed voters may have responded to these two quite differently. That would account for the results in Table 3-7 wherein the prospective sphere was not found to be significant for the most educated quartile. Unfortunately the pattern is only partially repeated in Table 3-9 for the 1992 data and not all for 1988. In addition, the 1984 data also show that the least educated rejected the prospective sphere. Though each subsample may have different reasons for doing the same thing, such a conclusion is beyond the scope of the data and results offered. Finally, the fact that the BEBR data show no relationship between the amount of resources a person has and his or her ability to discriminate between prospective factors suggests that the problem is not prospective evaluations. The CFA models examined obtain acceptable fits even though nearly all of the questions are prospective in nature. In short, my reaction to these results is to accept the general conclusion that discrimination among economic variables is not influenced by cognitive resources.

Why then do these results depart from past research? The second possibility is that economic opinions are less complicated and less ambiguous than ideology. I suggested above that discriminating between the various economic spheres can be a difficult task. However, the results suggest the opposite. In some ways, this is understandable. All of the questions analyzed clearly asked about different portions of economy. The relationships between the variables is much more obvious and probably stronger than the imputed relationships between measures of ideology such as policy positions on legalizing drugs and reforming welfare. In other words, economic attitudes are less complex and therefore are not difficult for most people to distinguish. Even prospective, or "banking," judgments are apparently not that difficult to form. Perhaps this is because they can be extrapolated from retrospective evaluations. Whatever the reason, the outcome is clear; education and interest has little influence over the structure of economic attitudes.

The second section of chapter 3 adds further support to that conclusion. Intra-sphere constraint is equal for all resource groups. The Barton and Parsons statistic show that voters have equivalent degrees of constraint within the various economic spheres, regardless of their level of resources. The results imply that the lower resource groups not only perceive the economic spheres as distinct but have consistent opinions regarding those spheres. Again this result is contrary to the hypothesis I offered at the outset.

Chapter 4, fortunately, offers more success. Two hypotheses were tested. The first suggested that people with fewer cognitive resources would rely more heavily upon personal and retrospective economic information. The second hypothesis suggested they would rely more upon contextual influence. Despite the fact that all resource groups distinguish equally between the economic spheres, those with fewer resources tend to rely more upon personal level evaluations. In addition, the lower resource groups tend not to use prospective evaluations; the higher resource groups are more prospectively oriented in their voting behavior. The influence of the economic context was mixed and without a pattern. As tested here, people do not rely upon the economic context to any large degree, and to the extent to which the context is important, its use is not related to cognitive resources.

In summary, the results of the two analysis chapters show that people are able to discriminate between spheres, have equally consistent opinions for each sphere, and yet use some economic perceptions more than others. What does it mean to the study of economic voting to conclude that all groups of people distinguish equally between economic spheres?

The implications apply most directly to research similar to that of MacKuen and Mouw (1993). They find clear differences in economic voting based upon socio-economic status. Weatherford (1983b) suggests that the differences are caused by a lack of information for the low resource group

and a choice to use the most representative information for the high resource group. The results of chapter 3 demonstrate that each group has equally well formed opinions. While not a direct test, this implies that Weatherford's hypothesis is wrong. The voters have opinions for each economic sphere and they simply do not combine or use them in the same way. Similarly, the results refute my arguments that the differential use of the economic spheres is due to structure of the opinions. In short, these results show that any resource group is capable of using any economic information and yet the results offer no insight as to why they "select" only certain pieces of information and not others.

Popkin, however, may offer a clue. It is possible to distinguish between spheres and still use them differently. Discrimination may be a necessary precondition to utilizing an economic attitude but it is apparently not a sufficient condition. Something other than the structure of one's attitude must also influence the weighting of economic variables. Popkin (1991) argues that education broadens the issues a person considers relevant. In chapter 3, I suggested that Popkin's argument implies that a "broader" attitude structure will result in a person discriminating between more economic spheres. This may still be an accurate implication, but an alternative interpretation should also be examined.

It is possible that the voter's "depth" of understanding is sufficient to allow them to discriminate between the various economic spheres studied

here. That is, the least educated have a deep enough opinion structure to be able to discriminate between the economic spheres I have examined. Indeed, this is a direct implication of my conclusion that economic evaluations are readily distinguishable to each group. If that is the case, then how would one apply Popkin's idea of a narrow-broad scope of opinion? In terms of economic evaluations, it could suggest that those with greater resources utilize more economic spheres in their voting decisions than those with fewer resources. Broader, in this case, means the voters take more factors into account when casting their votes. This suggests that a person with limited education would see the national economic situation as irrelevant to his or vote choice. That does not imply that he or she has no opinion about the nation's economy, but rather that the opinion is not seen as applicable to the decision at hand. The same logic, of course, would apply to prospective versus retrospective evaluations.

The results offered here provide some evidence for this interpretation. An examination of the paired tables in chapter 4 shows a consistent pattern; the higher resource groups tend to have more variables that significantly influence vote choice. Popkin might argue that the higher resource subsamples take into account more factors because they perceive them as being more relevant. However, the interpretation has some problems. First, it does not explain why the higher resource groups tend to use national economic perceptions more than personal. They would, according to Popkin, view both as relevant but why weight one more than the other. This may

not pose a direct problem for Popkin, but does suggest that some other factor is at work. Some people, for some reason, emphasize one factor over the other. Combining Weatherford (1983b) with Popkin, however, may offer a solution. Taking the two arguments together suggests that those people who do see both spheres as relevant will recognize that national conditions are more applicable than personal conditions. Those who do not see national conditions as relevant will continue to use personal level information. Since relevance is based upon education, and probably interest as well, this would give the appearance of lower educated individuals choosing personal evaluations over national, but for a different reason.

A more difficult problem with the evidence remains. The increase in significant variables often comes from demographic characteristics such as gender, age, and income. It is hard to understand how education could broaden a person's attitudes in such a way as to suggest they will become more likely to view their gender or age as a relevant political issue. Perhaps the characteristics relate to social or economic status and that status becomes relevant for more educated individuals. Unfortunately such a conclusion is beyond the scope of these data. It remains plausible, but unverifiable, that Popkin's idea of broadening results in some voters not perceiving the national economy as relevant to their voting decision and so relying upon personal and retrospective sources of information.

More generally, the results and conclusions offered above suggest that knowledge may not be necessary to formation of a stable and consistent opinion. For example, Holbrook and Garand (1993) show that most citizens have very inaccurate ideas about the actual rate of inflation and unemployment. More importantly, they find that the accuracy of a person's information is related to levels of attention to the media and education. Yet the results presented in chapter 3 indicate that attention to the campaign and education have no influence on the structure of the attitude. These findings are not necessarily contradictory. Holbrook and Garand's research can be seen as evidence that the economic evaluations I examine are likely to be based on sources of information beyond objective rates of inflation and unemployment. In fact, chapter 4 reaches essentially that conclusion by showing that the economic context has very little influence on economic perceptions. Together, this research and that of Holbrook and Garand shows that economic attitudes can be consistent without relying upon specific objective information.

This raises two additional questions. First, if economic attitudes are unrelated or only partially related to objective economic information, then what are they based upon? The results presented above suggest some trends, but provide little real evidence. Few variables included in these analyses offer much insight into the sources of economic voting. In some cases this is likely due to the variables. For example, the occasional lack of

a relationship between retrospective and prospective evaluations may be due the mixture of two spheres in prospective scale. On the other hand, even understanding personal and national evaluations is difficult. Most research has treated these spheres as independent variables; as dependent variables little is known about them.

Despite the failings presented above, I feel that interpersonal communication offers the best avenue for future research. Demographic characteristics are easily and accurately measured but yield little information. Better measures of discussion as it relates to economics should yield more. Who do people talk to about politics? What do those people think? The influence of discussing politics may vary depending upon who a person converses with and the setting in which it takes place. Talking politics at home will not carry the same economic information as discussing politics at work. In addition, the media may not be as influential or as informative as the social setting in which one lives. Similarly, different contextual variables may offer even more insight. In particular, a person's economic evaluations may be influenced by their neighborhood context, something not addressed by questions concerning group, personal, or state economic conditions. Questions that focus on the topics described above offer the potential of tapping into a person's communication network. If there is a lack of objective information, this may provide insight into a source of subjective information.

The information received, however, is not the only source of subjectivity. Lodge, McGraw, and Stroh (1989) suggest that people are not perfect information processors. They point to partisan predispositions that can influence the retention of political information. The data presented above provide evidence that partisanship colors economic judgments. But partisanship is almost certainly not the only attitude that filters information. A person's economic status could serve to screen economic information. The results presented here show that income, occupation, and social status have inconsistent influences upon economic evaluations. Thus, if economic status does influence economic perceptions the process must operate in a way unmeasured by those variables.

One possibility emphasizes the degree of "security" in a person's status. A person can perceive his or her status as marginal, or threatened, even if he or she has a large income or professional position. Security would be more directly related to one's type of employer. Government employees and professors, for example, would feel relatively more secure than self-employed individuals. Retirees on fixed income, even if the income is substantial, may feel insecure about their economic prospects. Measuring economic security could be accomplished by categorizing people based upon the nature of their employment. Are they salaried or paid hourly? Is their job protected over time or renewed annually? How long has the person been employed by their present employer? Finally, people can be directly

asked how secure they feel about their jobs and economic status. A person whose economic status is somewhat marginal is more likely to have a negative view of the economy. In addition, the more insecure a person feels about his or her status the more relevant that information will be in terms of vote choice; he or she will be more likely to rely upon personal information. In short, economic security may bias both a person's subjective opinion of the economy and their use of that attitude when voting.

As noted above, the use of a particular attitude rests upon that attitude being perceived as politically relevant. Popkin's (1991) argument that education broadens attitudes and increases political relevance needs examination. Applying Luskin's definition of political sophistication reinforces Popkin's arguments. Luskin (1987) suggests that the "range" of an attitude is related to sophistication. Range and breadth are very similar concepts. Each suggests that a more sophisticated (Luskin, 1987) or educated (Popkin, 1991) individual will take into account more attitudes or opinions. Their arguments could be tested in at least two ways. The simplest would be to direct some respondents to spend time thinking about as many issues as they can before offering an opinion while asking others to respond immediately. A similar strategy was employed by Kuklinski, Riggle, Ottai, Schwarz, and Wyer (1991). They found that the amount of consideration given to questions regarding tolerance influenced the level of reported tolerance. A second, and more complex, method would be to use open ended questions and ask respondents to describe their thought processes.

Either of these strategies should make it possible to determine whether the breath or range of a person's attitudes influences the way in which they utilize the opinions they possess.

Finally, it is not enough to simply seek more sources of economic information. Better measures of discussion, context, or economic status would offer few new insights without adequate measures of economic attitudes. The first step requires clearly specifying the economic spheres to be studied. Ideally the data will have indicators of all four spheres-- personal, group, state, and national. Group and state economic judgments require particular examination. In the present case, group economic perceptions are available in only one national dataset, while state economic evaluations are measured by single items in two datasets. Chapter 4 clearly indicates that generalizing from one election is questionable. Some economic spheres are more relevant in one election and less important in another. An even stronger case for replication can be made for state economic perceptions. Generalizing from a single election and a single state is particularly hazardous. Finally, prospective and retrospective attitudes should be examined together. The relationship between judgments of the past and the future require more elaboration. In particular, determining what causes people to develop prospective opinions that differ from retrospective opinions is crucial to understanding how economic judgments are formed.

Quite often research raises more questions than it answers. Such is the case here. The lack of support for my hypotheses in chapter 3, combined with a mixture of results in chapter 4, calls into question both past research and some of the ideas it is based upon. Fortunately, the first step in advancing knowledge is asking the right questions. Hopefully this research offers new insights into economic voting as well as raises the types of questions that will lead to greater understanding.

APPENDIX A
REPLICATIONS OF CHAPTER 3 FOR VALIDATED VOTERS ONLY.

Appendix Table A-1.
 Comparisons of Alternative Confirmatory Factor Analytic Models .
 NES Data for Validated Voters only.

	1984 NES	1988 NES
Model 1: 1 Factor	562.7/54 (.8531) [.7178]	Model 1: 1 Factor 323.6/27 (.7985) [.8369]
Model 2: 2 Factors:- Personal/Group and National	382.2/53 (.9050) [.8069]	Model 2: 2 Factors- Personal and National 139.2/26 (.9232) <u>[.9258]</u>
Model 3: 2 Factors- National/Group and Personal	461.3/53 (.8822) [.7663]	Model 3: 3 Factors- Personal, National, and Future 135.1/24 (.9246) [.9335]
Model 4: 3 Factors- Personal, Group, National	210.8/51 (.9539) [.9011]	_____
Model 5: 4 Factors- Personal, Group, National, and Future	199.1/48 (.9565) [.9062]	_____

Note:

First lines of cell entries represent χ^2 /degrees of freedom.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_2 (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_r .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

Appendix Table A-2.
Parameter Estimates for Confirmatory Factor Analysis Model for 1984 ANES
for Validated Voters only.

Variables	Factor 1: Personal	Factor 2: Group	Factor 3: National	Factor 4: Future
R's Current Financial Condition	1.000 (-----)			
R's Income versus the Cost of Living	.9574** (.0368)			
How Federal Policies Affect R's Financial Condition	1.218** (.0690)			
Group's Economic Condition		1.000 (-----)		
Group's ability to keep up with Cost of Living		.8373** (.0363)		
How Federal Policies have affected R' Group		.9174** (.0368)		
National Levels of Inflation			1.000 (-----)	
National Levels of Unemployment			2.0175* (.1434)	
General National Economy			1.844** (.1152)	
How Federal Policies Affect the Nation's Economy			1.198** (.1169)	
Expectations for the Nation's Future Economy				1.000 (-----)
Expectations for R's future Financial Condition				.7784** (.0880)
Chi-square/d.f= 199.1/26	$\Delta_2 = .9565$	$m_k = .9062$	N= 766	

Note: Coefficients are unstandardized. Standard Errors are in parentheses.

* = $p < .10$; ** = $p < .05$.

Appendix Table A-3.
 Parameter Estimates for Confirmatory Factor Analysis Model for 1988 ANES
 for Validated Voters only.

Variables	Factor 1: Personal	Factor 2: National	Factor 3: Future
R's Current Financial Condition	1.000 (-----)		
R's Income versus the Cost of Living	.9532** (.0715)		
How Federal Policies Affect R's Financial Condition	.5207** (.0438)		
National Levels of Inflation		1.000 (-----)	
National Levels of Unemployment		1.286** (.1118)	
General National Economy		1.337** (.1035)	
How Federal Policies Affect the Nation's Economy		1.313** (.1008)	
Expectations for Next Year's National Economy			1.000 (-----)
Expectations for R's future Financial Condition			.5932 (.0938)
Chi-square/d.f. = 135.2/24	$\Delta_2 = .9246$	$m_k = .9355$	N = 832

Note: Coefficients are unstandardized. Standard Errors are in parentheses.

* = $p < .10$; ** = $p < .05$.

Appendix Table A-4.
Comparisons of Alternative Models based upon levels of Education and Attention to the Campaign.
1984 NES for Validated Voters only.

	Education				Attention to the Campaign			
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile
Model 1: 1 Factor	77.2/54 (.9319) [.8892]	192.8/54 (.8616) [.7516]	197.8/54 (.8308) [.6862]	258.2/54 (.8062) [.6440]	173.2/54 (.6668) [.5375]	199.1/54 (.7077) [.5571]	165.6/54 (.8900) [.7117]	178.8/54 (.8865) [.7029]
Model 2: 2 Factors- Personal/Group and National	65.1/53 (.9647) [.9408]	139.9/53 (.9134) [.8362]	143.6/53 (.8935) [.7888]	195.7/53 (.8647) [.7352]	122.5/53 (.8063) [.6963]	147.3/53 (.8103) [.6836]	144.6/53 (.9098) [.7564]	156.1/53 (.9063) [.7473]
Model 3: 2 Factors- National/Group and Personal	70.5/53 (.9488) [.9153]	164.9/53 (.8885) [.7944]	174.6/53 (.8572) [.7275]	213.2/53 (.8482) [.7081]	150.1/53 (.7294) [.6032]	171.3/53 (.7622) [.6206]	135.7/53 (.9186) [.7772]	146.5/53 (.9151) [.7679]
Model 4: 3 Factors- Personal, Group, National	<u>54.9/51</u> (.9886) [.9804]	96.4/51 (.9548) [.9108]	101.4/51 (.9409) [.8763]	138.7/51 (.9170) [.8277]	<u>77.8/51</u> (.9258) [.8698]	107.1/51 (.8876) [.7975]	93.0/51 (.9587) [.8798]	100.4/51 (.9552) [8697]
Model 5: 4 Factors- Personal, Group, National, and Future	51.5/48 (.9899) [.9824]	89.6/48 (.9587) [.9179]	82.7/48 (.9595) [.9133]	141.3/48 (.9120) [.8179]	74.3/48 (.9278) [.8721]	97.7/48 (.9011) [.8185]	95.6/48 (.9533) [.8648]	103.3/48 (.9500) [.8555]

Note:

First lines of cell entries represent χ^2 /degrees of freedom.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_b (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_c .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

Appendix Table A-5.
Comparisons of Alternative Models based upon levels of Education and Attention to the Campaign.
1988 NES for Validated Voters only.

	Education					Attention to the Campaign						
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile
Model 1: 1 Factor	63.6/27 (.7715) [.8493]	80.9/27 (.8649) [.8985]	80.9/27 (.8363) [.8430]	149.7/27 (.7764) [.8140]	47.2/27 (.8409) [.8705]	100.5/27 (.7296) [.7788]	70.0/27 (.8740) [.8497]	127.9/27 (.6877) [.6680]				
Model 2: 2 Factors- Personal and National	36.3/26 (.9359) [.9550]	42.7/26 (.9583) [.99674]	52.3/26 (.9206) [.9203]	83.7/26 (.8949) [.9077]	37.7/26 (.9087) [.9229]	62.6/26 (.8660) [.8831]	43.4/26 (.9493) [.9364]	63.9/26 (.8829) [.8592]				
Model 3: 3 Factors- Personal, National and Future	34.0/24 (.9385) [.9563]	44.1/24 (.9500) [.9609]	46.6/24 (.9320) [.9309]	78.7/24 (.9008) [.9123]	32.7/24 (.9332) [.9422]	63.7/24 (.8555) [.8737]	46.1/24 (.9357) [.9196]	84.0/24 (.8159) [.7866]				

Note:

First lines of cell entries represent χ^2 /degrees of freedom.

Numbers in parentheses represent the Bollen Incremental Fit Index Δ_x (1990).

Numbers in brackets represent the McDonald (1989) and McDonald and Marsh (1990) normed measure of centrality m_x .

Legend:

Bolded models are significant at $p < .05$ based on Chi-square comparison with next closest model

Italicized models are significant at $p < .10$ based on Chi-square comparison with next closest model

Underlined models are selected as best fitting on the basis of parsimony

Appendix Table A-6.
Barton-Parsons Measure of Mean Standard Deviation
for 1984 using Validated Voters only.

	Levels of Education					Attention to the Campaign				
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean
Future Economic Perceptions	.6346 (N=156)	.6723 (N=339)	.6080 (N=242)	.6920 (N=310)	.6576 (N=1047)	.6637 (N=148)	.6517 (N=170)	.6397 (N=206)	.6698 (N=2280)	.6563 (N=752)
National Economic Perceptions	.7760 (N=157)	.6982 (N=356)	.6832 (N=251)	.7009 (N=311)	.7068 (N=1075)	.6949 (N=148)	.6855 (N=178)	.6363 (N=222)	.7724 (N=231)	.6991 (N=779)
Group Economic Perceptions	.4960 (N=126)	.5398 (N=300)	.4398 (N=221)	.4534 (N=268)	.4843 (N=915)	.5027 (N=117)	.4481 (N=149)	.4849 (N=197)	.4598 (N=211)	.4720 (N=674)
Personal Economic Perceptions	.5953 (N=168)	.5875 (N=361)	.6186 (N=256)	.6137 (N=312)	.6034 (N=1097)	.5747 (N=145)	.6182 (N=173)	.6135 (N=232)	.5923 (N=241)	.6009 (N=791)

Appendix Table A-7.
 Barton-Parsons Measure of Mean Standard Deviation
 for 1988 using Validated Voters only.

	Levels of Education					Attention to the Campaign				
	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean	Bottom Quartile	Lower Middle	Upper Middle	Highest Quartile	Sample Mean
Future Economic Perceptions	.7186 (N=150)	.6631 (N=311)	.7206 (N=185)	.7139 (N=350)	.7000 (N=996)	.7358 (N=92)	.6373 (N=166)	.7251 (N=158)	.7039 (N=141)	.6953 (N=557)
National Economic Perceptions	.7004 (N=147)	.6442 (N=325)	.6728 (N=190)	.6563 (N=357)	.6619 (N=1019)	.6838 (N=96)	.6271 (N=170)	.6559 (N=166)	.6973 (N=156)	.6631 (N=588)
Personal Economic Perceptions	.6530 (N=161)	.5999 (N=345)	.66312 (N=197)	.6955 (N=365)	.6463 (N=1068)	.6312 (N=105)	.5948 (N=175)	.6342 (N=177)	.6487 (N=158)	.6262 (N=615)

APPENDIX B:
DESCRIPTION OF VARIABLES

Vote Choice: A follow up to whether or not R voted. "Who did you vote for?" Coded 0= All other candidates candidates; 1= Bush or Regan.

NES Prospective Economic Perceptions: Items are: 1) "What about next 12 months? Do you expect the national economy to get better, get worse, or stay about the same?" 2) "Now looking ahead, do you think that a year from now you (and your family living here) will be better off financially, or worse off, or just about the same?" Each was coded 1= much worse, 2= somewhat worse, 3= the same, 4= somewhat better, 5= much better.

NES National Economic Perceptions: Items are: 1) "Would you say that over the past year inflation has gotten better, stayed about the same or gotten worse?" 2) "Would you say that over the past year unemployment has gotten better, stayed about the same, or gotten worse?" 3) "How about the economy? Would you say that over the past year the nation's economy has gotten better, stayed about the same, or gotten worse?" 4) "Over the past year would you say that the economic policies of the federal government have made the nation's economy better, worse, or haven't they made much difference?" All were coded 1= much worse, 2= somewhat worse, 3= the same (no difference for item 4), 4= somewhat better, 5= much better.

BEER National Economic Perceptions: Items are: 1) " Now turning to business conditions in the country as a whole-- do you think that during the next 12 months we'll have good times financially, or bad times, or what?" 2) " Looking ahead, which would you say is more likely -- that in the country as a whole we'll have continuous good times during the next five years or so, or that we will have periods of widespread unemployment or depression, or what?" Items 1 and 2 were coded 1= Bad times, 2= Bad times with qualifications, 3= Good and bad times, 4= Good times with qualifications, 5= Good times; 3) "How about people out of work during the coming 12 months -- do you think that there will be more unemployment than now, about the same, or less?" 4) "Looking ahead, how about people out of work during the next five years or so -- do you think that there will be more unemployment than now, about the same, or less?" Items 3 and 4 were coded 1= more, 3= same, 5= less.

NES Group Economic Perceptions: Items are: 1) "Would you say that over the past year the income of [R's group] has gone up more than the cost of living, stayed about even, or fallen behind." 2) "Would you that the economic policies of the Federal government have made [R's group] better off, worse off, or haven't they made much difference?" 3) "Would you say that over the past year the economic position of [R's group] has gotten better, stayed about the same, or gotten worse?" Coded 1= fallen behind alot or much worse, 2= fallen behind a little or somewhat worse, 3= about the same, 4= gone up a little more or somewhat better, 5= go up alot or much better.

BEER State Economic Perceptions: Items are: 1) "Looking again at the state of Florida -- do you think that during the next 12 months we'll have good times financially in Florida, or bad times, or what?" 2) " Looking ahead, which would you say is more likely -- that in the state of Florida as a whole we'll have continuous good times during the next five years or so, or that we will have periods of widespread unemployment or depression, or what?" Each was coded 1= Bad times, 2= Bad times with qualifications, 3= Good and bad times, 4= Good times with qualifications, 5= Good times.

NES Personal Financial Conditions: Items are: 1) "We are interested in how people are getting along financially these days. Would you say that you (your family) are better off or worse off than a year ago?" 2) "Do you think that your (your family's) income has gone up more than the cost of living, fallen behind, or stayed about the same?" 3) "Over the past year have the economic conditions of the federal government made you (your family) better off, worse off, or haven't they made much difference?" Coded 1= much worse (fallen behind a lot), 2= somewhat worse (fallen behind a little) 3= the same, 4= somewhat better (gone up a little), 5= much better (gone up a lot).

BEER Personal Financial Conditions: Items are 1) "We are interested in how people are getting along financially these days. Would you say that you (and your family living there) are better off or worse financially than you were a year ago?" 2) "Now, looking ahead -- do you think that a year from now you (and your family living there) will be better off financially, or worse off, or just about the same as now? Each was coded 1= Worse off, 3= same, 5= Better off.

Change in Unemployment: Coded as the percentage difference between the state or county unemployment rate for the year prior to the election and the year of the election.

Discuss Politics with Friends: "How many days during the past week did you talk about politics with your family or friends?" Coded as actual number of days.

No Discussion-State Employment interaction: A dummy was coded 1 if R discussed politics 1 or more days, 2 if it R did not discuss politics at all. This was multiplied with State Employment.

Discuss four days more-State Employment interaction: A dummy was coded 1 if R discussed politics less than 4 days per week, 2 if R discussed politics 4 or more days. The result was multiplied with State Employment.

Party Identification: "Generally speaking do you usually think of yourself as a Republican, Democrat, an independent, or what?" Coded 1= strong Democrat, 2= weak Democrat, 3= leaning Democrat, 4= Independent, 5= leaning Republican, 6= weak Republican, 7= strong Republican.

Self placed Social Class: Coded 1=Lower class, 2= Average Working, 3= Working class, 4= Upper working, 5= Average middle, 6= Middle class, 7= Upper middle, 8= Upper class.

Family Income: Coded according to NES categories.

Occupation: Coded 1= farmers, 2= unskilled labor, 3= skilled labor, 4= clerical/sales, 5= managerial, 6= professional.

Education: Quarters divided at 1=Less than High school Diploma, 2= High School Diploma, 3= Some College, 4= College Graduate.

Age: Coded as actual number of years.

Race: Coded 1= White, 2= Nonwhite.

Gender: Coded 1= Male, 2= Female.

South: Coded 1= Nonsouth, 2= South (13 States of the confederacy).

Campaign Interest and Knowledge: Items are 1) "How much attention did you pay to news on TV about the campaign for President- a great deal, quite a bit, some, very little, or none?" 2) "How much attention did you pay to newspaper articles about the campaign for President- a great deal, quite a bit, some, very little, or none?" Coded 1= none, 2= very little, 3= some, 4= quite a bit, 5= a great deal. 3) "Some people don't pay much attention to political campaigns. How about you? Would you say you have been very much interested, somewhat interested, or not much interested in the political campaigns this year?" Coded 1= not much, 3= somewhat, 5= very much interested. The items were added to form the scale and recode to a 1 to 5 range.

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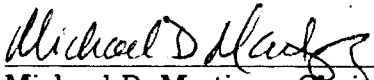
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BIOGRAPHICAL SKETCH

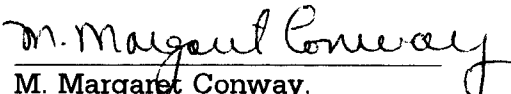
My undergraduate degree is from Furman University. I majored in Political Science but I took as many classes as possible outside my major. In particular I studied economics, sociology, and history. I think cross-disciplinary training is especially helpful for those who want to understand human behavior. In graduate school I have gravitated towards political behavior, a very flexible discipline.

In terms of my personal life, I am married, and have a daughter. I am also employed; I have been hired by Florida International University in Miami. My plans are to continue researching and teaching to whatever extent possible. If they conflict with one another I am not sure which I will emphasize.


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Michael D. Martinez, Chairman
Associate Professor of Political
Science

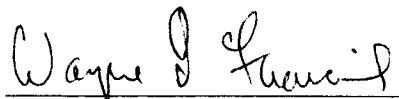
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


M. Margaret Conway,
Professor of Political Science,
Cochair

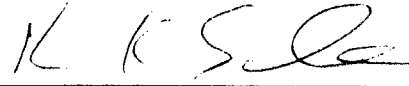
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


David Denslow
Distinguished Service Professor
of Economics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Wayne Francis
Professor of Political Science

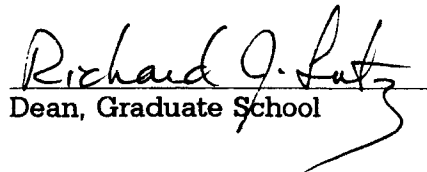
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Richard Scher
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This dissertation was submitted to the Graduate Faculty of the Department of Political Science in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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