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What Does the Public Know about Economic Policy, and How Does It Know It?

A LONG TRADITION IN economic theory models economic policy decisions as solutions to optimization problems solved by rational *and well-informed* agents:¹ a single policymaker minimizes a loss function subject to some constraints. Another body of literature models policy decisions as if they were made by *well-informed* voters in elections of some sort.²

As everyone knows, each of these approaches is allegorical in some respects, two of which are germane to this paper. First, apart from votes on school budgets and on some bond issues, economic (and other) policy decisions are rarely made by *direct* democracy. We instead utilize *representative* democracy, in which elected politicians decide on our behalf. Second, in many cases the agents making the decisions may be neither as well informed nor as rational as *homo economicus*. Robert Blendon and his coauthors, for example, find large gaps between measured economic performance and the public's perception thereof.³

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1. "Well informed" need not connote perfectly informed. A large literature, of course, deals with imperfect information.

2. Black (1948) is an early reference on the median voter model. Downs (1957) extended the model to allow for political parties. See Persson and Tabellini (2000) for a modern treatment of political economy.

3. Blendon and others (1997).

Monetary policy decisionmaking may perhaps approximate the loss function model. Decisions there are made by a technocrat or by a committee of technocrats, many of whom think like (or are) economists.⁴ But fiscal policy clearly is not made this way. Even if one models the president of the United States as minimizing a loss function, the president's recommendation is just the starting point of a long process of political horse trading. There may be 536 relevant loss functions rather than just one—and they will not all be the same. Similarly, a complex brew of politicians makes the major decisions in virtually all other areas of economic policy: labor laws, tax laws, environmental policy, and social insurance programs, to name just a few.⁵

Of course, the fact that the voting and loss function models are allegorical does not necessarily make them misleading, when interpreted as “as if” hypotheses. But to make a judgment on the applicability of these models of decisionmaking, it seems worth digging down deeper into the actual processes that guide policymaking. This paper takes a step in that direction.

Specifically, we take it as axiomatic that, first, the political mechanism makes almost all important economic policy decisions, and second, the decisions of elected politicians are heavily influenced by public opinion. These are hardly dazzling insights. The first statement is simply a fact; it is also central to both standard approaches to the economic theory of policymaking: loss functions and voting. The second is rarely discussed by economists in their scholarly work. But its importance is apparent from the tremendous resources that politicians devote to assessing public opinion, and there is plenty of supportive evidence in political science.⁶

Legitimate doubts have been raised about whether the types of questions commonly asked in public opinion polls elicit individuals' true preferences.⁷ That is not our question here, because understanding the determinants of public opinion *as expressed in standard polls* remains

4. On the difference between individual and group decisionmaking in monetary policy, see Blinder and Morgan (forthcoming).

5. Why this is so is an interesting question that we do not deal with here. See Blinder (1997).

6. Among the many references that could be cited, see Page and Shapiro (1983) and Monroe (1979).

7. See, for example, Kahneman (1986).

important as long as these polls influence politicians' policy decisions. This point remains valid irrespective of whether people understand the issues well or are confused about them, whether they are self-interested or public spirited, and whether they are well informed or poorly informed.

If we accept these points, a host of interesting questions arise, two of which are the foci of this paper. First, to what extent is mass public opinion shaped by political ideology, self-interest, and—don't laugh—economic knowledge? Second, to the extent that knowledge is relevant to opinions on economic issues, how do people inform themselves?

This paper offers many detailed answers to these and related questions, and so it may be useful to begin with a broad characterization that may help the reader see the forest amid all the trees to follow. Subject to many caveats, our main finding is that *ideology* is the most consistently important determinant of public opinion on a number of major economic policy issues, and objective measures of material *self-interest* are the least important.⁸ *Knowledge* about the economy ranks somewhere in between: sometimes it is important, sometimes not. To us, this does not paint a picture in which *homo economicus* is in charge.

Our evidence comes from a unique, new telephone survey of a random sample of the U.S. population age eighteen and older. We begin by setting up a recursive model of the formulation of public opinion. Next we explain the survey that we designed and implemented and discuss some of the specific questions.⁹ The two lengthy sections that follow make up most of the paper. The first discusses some of the more interesting tabulations and cross-tabulations of the data; these are the straight facts. The second presents estimates of our econometric model of public opinion. We conclude with some overarching, although admittedly speculative, interpretations of our findings.

8. Our findings are consistent with Citrin and Green's (1990, pp. 16–17) survey of the political science literature, which concludes, "Taken as a group, the studies summarized above appear devastating for the claim that self-interest, defined narrowly as the pursuit of immediate material benefits, is the central motive underlying American public opinion. . . . When self-interest effects did appear, they generally were weaker than the influence of alternative sources of opinions such as values, feelings of group solidarity or ideology."

9. We do not include the survey instrument here because it is long (over forty pages) and somewhat hard to read owing to complexities in the skip pattern. It is available, along with additional descriptive statistics, under "Economic Issues Survey" on the website of the Princeton Survey Research Center at www.wws.princeton.edu/~psrc/surveys.html.

On The Determinants of Public Opinion

To formulate an estimable model of how public opinion on economic policy issues is formed, we work backward. To the extent that the process is rational at the individual level, a person's position on an issue should depend on her *self-interest*, her *ideology* or "values," her factual *knowledge* and conceptual understanding of the issue, and the degree to which she bases her decision on self-interest rather than her perception of what is in the public interest.¹⁰ The last of these is likely the hardest to measure, even by asking people. Our basic model is

$$(1) \quad OP_i = f(SI_i, ID_i, K_i, ED_i, X_i) + e_{1i},$$

where OP is the opinion of person i at the time of the survey, SI is self-interest, ID is ideology, K is knowledge, ED is education, X is a vector of other "demographic" variables such as race, sex, age, and income, and e_{1i} is an error term. (There might well be lags in this process, but we have no time-series information.)

Our survey elicits some information about each respondent's ideology and self-interest. But we make no attempt to explain how any particular person's values and ideology were formed, or why his or her self-interest is what it is. We simply treat these variables as econometrically exogenous. (For example, one of our "self-interest" variables is income, but we make no attempt to explain family income.) Our main focus is on the acquisition of information, where the survey probed much more deeply.

The amount and kind of knowledge a person has on any particular economic issue ought to depend on the costs and benefits of acquiring such knowledge. Our survey was thus designed not only to measure how well informed respondents are, but also how and where they get their information. Thus,

$$(2) \quad K_i = g(ED_i, D_i, S_i, Q_i, X_i) + e_{2i},$$

where D is a survey measure of how strongly the respondent *desires* to be informed about the economy and economic policy, S is a vector representing the *sources* of information that the individual uses, and Q is an

10. See Zaller (1992) for an alternative, although related, framework for how individuals acquire and transform information into responses to public opinion questions. Unlike ours, Zaller's model does not start by assuming rationality.

indicator of the *quantity* or intensity of information. These variables are defined in the next section.

Finally, we try to explain why people do or do not choose to inform themselves, and in what ways:

$$(3) \quad S_i = h_1(ED_i, D_i, SI_i, ID_i, X_i) + e_{3i}$$

$$(4) \quad Q_i = h_2(ED_i, D_i, SI_i, ID_i, X_i) + e_{4i}$$

$$(5) \quad D_i = h_3(ED_i, SI_i, ID_i, X_i) + e_{5i}$$

So, and now working forward from “causes” to “effects,” our model says that people’s education, desire to be informed, self-interest, and ideology combine to determine how much information—and what kinds of information—they acquire (equations 3, 4, and 5). This information, along with their education and desire to be informed, determines their knowledge of an issue (equation 2). And this knowledge, along with their ideology and self-interest, determines their opinions (equation 1). We pay closest attention to equations 1, 2, and 3: (in reverse order) how people inform themselves, the determinants of knowledge, and the determinants of mass public opinion.

The Survey

In the spring of 2003 we conducted a telephone survey of a random sample of the U.S. population eighteen and older, using random-digit dialing.¹¹ As is typical for surveys of this type, the response rate (calculated according to American Association of Public Opinion Research guidelines) was low: just 26 percent of working residential numbers. But, perhaps surprisingly, the available evidence does not suggest that such low response rates lead to major statistical biases.¹² We completed 1,002 interviews and then weighted the responses to match the March 2002 pop-

11. The survey was conducted by Princeton University’s Survey Research Center. The interviews began on March 28 and ended on June 3. In the case of “no answers,” the survey protocols called for up to eight callbacks. It has been suggested to us that mentioning Princeton University might have affected the response rates. But the sample did not appear exceptional in terms of education, age, or other objective attributes.

12. See, for example, Keeter and others (2000).

ulation estimates of the U.S. Census Bureau's Current Population Survey (CPS) in the following five respects: race, age, sex, education, and geographical region.¹³ All the results reported in this paper reflect that weighting.

The survey, which typically took twelve to seventeen minutes to administer, began with a series of questions about economic policy issues, some of which are factual and some of which solicit the respondent's opinion. An example of the former is

"Roughly what size (in billions of dollars) is this year's federal budget deficit?"

An example of the latter is

"Do you think the federal budget deficit ought to be reduced?"

The five policy issues we dealt with are taxes, the federal budget deficit, the minimum wage, Social Security, and health insurance. Each issue involves several questions. In some cases (detailed below), the ordering of the questions was randomized. But the ordering rarely mattered.

After thus giving people an idea of the sort of economic policy issues in which we were interested, the survey went on to inquire about how they become informed about such issues. The transition question to that part of the survey was

"Next, we'd like to know how important it is to you to keep well informed about major economic policy issues, *such as the ones we have just been discussing*. Would you say it is extremely important, very important, somewhat important, not very important, or not important at all?" (emphasis added)

The answers to this question comprise the "desire to be informed" variable, D_i , in equations 3, 4, and 5. Notice the deliberate framing of what we mean by "major economic policy issues."

That initial question about the importance of information was followed by a series of inquiries into "the sources of information you use, either to learn about economic issues or to learn the opinions of others on these issues." One prototypical example is

"Do you watch television regularly, occasionally, or not at all to learn about economic issues?"

13. Without this weighting, women, senior citizens, the college educated, and non-Hispanic whites would all have been overrepresented. The weights for each observation are derived from an iterative procedure that balances the five variables. Thus we do not match the CPS counts exactly.

Similar questions were asked for ten other sources of information: radio, newspapers, magazines, books, statements by political leaders, statements by business leaders, statements by economists, statements by civic or religious leaders, discussions with friends and relatives, and the Internet (in that order). Most people presumably encounter statements by political leaders, business leaders, or economists via one of the standard media channels (such as television or newspapers). But, in our judgment, information from these three groups of “experts” was sufficiently different from the standard media fare that they merited inclusion on their own.

The final section of the survey collected data on individual characteristics, including the usual demographic variables (such as race, age, and sex), but also including several less standard variables that relate to the five policy issues, such as income, whether the person reported voting in the 2000 election, whether the respondent was covered by health insurance, and whether the respondent’s parents were alive.

Some Straight Facts

There are no well-accepted models of the phenomena we are studying, the directions of causation among the variables we have collected are not always obvious (and in some cases causation is clearly bidirectional), and we have a paucity of truly exogenous variables (race, sex, and age being the only unexceptionable ones). Valid objections can therefore surely be raised against *any* identifying assumptions we might propose in formulating a regression model, such as the recursive structure we impose. Undaunted, we will nonetheless do so when we estimate econometric models later. But before jumping into such controversial waters, we first provide an exploratory analysis of the data *without* imposing any structure on them.

The Demand for Economic Information

We begin with the desire to be informed, the variable D in the model. Almost 24 percent of respondents said it was “extremely important” to keep well informed about major economic policy issues, and just over 50 percent said it was “very important.” Another 23.5 percent characterized keeping well informed as “somewhat important,” leaving fewer than

3 percent of the sample in the “not very important” or “not important at all” categories. Frankly, we were surprised—and pleased—by the strength of the expressed desire to be informed.¹⁴

When we look across subgroups of the population, the answers to this question do not vary significantly (at the 5 percent level) by race, sex, education, or income. But older respondents expressed a slightly stronger desire to be well informed. We also divided the sample into those who were working at the time of the survey (56 percent of the sample) and those who were not. The working population turned out to have a slightly *weaker* desire to be informed than the heterogeneous nonworking group, which includes the unemployed, retirees, homemakers, and students.

In a survey that inquires about information relevant to economic *policy* issues, we expected to find many systematic differences by political ideology. So respondents were asked to classify themselves as liberal (15 percent of our sample), conservative (29 percent), moderate (19 percent), other (4 percent), or “haven’t thought much about it” (33 percent). As shorthand, we refer to the last group—the largest—as the “nonpolitical.” Using all five categories in a χ^2 test of independence, we find little evidence of differences by ideology in the desire to be informed ($\chi^2 = 28.6$, $p = 0.133$).

However, we do find rather strong differences with respect to a variable that might be called “political engagement” (rather than partisanship). We asked respondents whether they had voted in the 2000 presidential election. The answers to this question do not accurately represent actual voting behavior, since 68 percent of our respondents claimed to have voted, whereas the national data show that only 51 percent of the voting-age population actually did vote.¹⁵ The data may instead indicate

14. The interviewers’ script began, “Hi. My name is _____, and I’m calling from Princeton University to conduct a fifteen-minute survey about economics and access to economic information.” Given this preface, perhaps respondents believed they *should* express a desire to be informed. On the other hand, the question about desire to be informed came after a series of daunting questions on policy issues, which may have deflated some respondents’ beliefs about how well informed they actually were.

15. See the Federal Election Commission data at www.fec.gov/pages/2000turnout/reg&to00.htm. If our sample is representative, and voters accurately reported that they voted, our finding implies that 34.7 percent ($0.17 \times 0.49 \times 100$) of nonvoters reported voting. This figure is a bit higher than found in surveys for earlier elections, but very close to the overreporting of voting found for the 2000 election. Silver, Anderson, and Abramson (1986) find that 27.4 percent of nonvoters reported voting in 1964, 31.4 percent in 1976, and 27.4 percent in 1980. The self-reported voting rate in the 2000 election based on the

which respondents believe they *should have* voted (as well as those who actually voted). In any case the self-described “voters” were considerably and significantly ($\chi^2 = 26.0$, $p = 0.001$) more interested in keeping informed than were the nonvoters. Fully 78 percent of “voters” said keeping well informed was either extremely or very important to them, versus only 66 percent of nonvoters. This strong correlation supports our view that self-professed voting is an indicator of political engagement. As further support of the notion that the “nonpoliticals” are disengaged, we note that only 47 percent of them reported having voted in 2000, versus 79 percent of everyone else.

Multiple regression estimates of equation 5 were not very informative, however, and hence are not reported. We began by estimating an ordered probit model using the three regressors suggested by the simple correlations: age, working status, and whether the individual claimed to have voted. Only the last of these was significant. We then experimented with a variety of demographic, ideology, and self-interest variables, as per equation 5, but found hardly any other significant regressors. In a word, our ability to predict a person’s desire to be informed based on measurable variables is negligible.

The next survey question asked each respondent who said that being informed was at least “somewhat important” to state “the main reasons why you wish to be well informed.” The choices listed were the five shown in table 1 (respondents could choose more than one reason). Just over half of our respondents gave the last response, which might be called the “civics class” answer. But, perhaps inconsistently, only 22 percent offered politics or voting as a reason. Slightly more than half mentioned the relevance of economic issues to their personal finances. But, in a big surprise to us, only 4 percent specifically mentioned the stock market as a reason for wanting to keep informed.

Do these answers vary by personal characteristics? The only general answer, derived from the results below, is “somewhat.”

National Election Survey, which includes citizens only, exceeded the actual voting rate of citizens by 17 percentage points (McDonald, 2003), the same as in our data. The voting rate of citizens in 2000 was 55 percent, which implies that 39 percent of citizens who did not vote reported that they had voted, slightly higher than the rate for all respondents (citizens and noncitizens) in our sample. Note also that some respondents would not have been old enough to vote in 2000. When those under 21 are omitted from the sample, the share claiming to have voted rises to 72 percent.

Table 1. Reasons Given for Wanting to be Informed about Economic Policy^a

<i>Reason</i>	<i>Percent of respondents</i>
Affects personal finances	54
Affects business or profession	7
Relevant to stock market, investments	4
Economic issues are important politically; might affect my vote	22
To be a responsible citizen; just like to keep informed	55

Source: Authors' survey described in the text.

a. Numbers sum to more than 100 percent because respondents could offer more than one answer.

DEMOGRAPHICS. Differences by age, sex, and race were generally minor. The only notable ones were that older people were slightly more likely to list the last response shown in table 1 (59 percent versus 51 percent of younger people, $p = 0.043$),¹⁶ and that men were more likely than women to say that being informed might be politically important or affect their vote (26 percent versus 19 percent, $p = 0.010$). Because racial differences are so ubiquitous in cross-sectional work, we were surprised to find no significant racial differences in the professed reasons for desiring to be well informed.

ECONOMIC STATUS. Differences by education, employment status, and income were more notable. For example, college-educated people were substantially more likely than others to list the following three reasons for wanting to be informed: the relevance of economic information for politics or their vote (mentioned by 35 percent of the college educated versus 17 percent of others, $p = 0.000$), the relevance to their business or profession (10 percent versus 6 percent, $p = 0.008$), and the relevance to personal finances (60 percent versus 51 percent, $p = 0.018$). Not surprisingly, employed people were much more likely (10 percent versus 3 percent of nonemployed, $p = 0.000$) to mention their job or profession as a reason for wanting to keep informed about the economy. And differences by income class were pervasive.¹⁷ Compared with lower-income people, higher-income people were *more* likely to mention their personal finances (59 percent versus 48 percent, $p = 0.005$), the relevance to their business

16. Since the mean and median ages in our sample are both approximately forty-five, we divided our sample into "younger" and "older" subsamples at that age.

17. For these χ^2 tests, we divided the sample at the \$40,000 mark, which is close to the median; 45 percent of the sample reported a household income of \$40,000 or less. The next income bracket was \$40,000 to \$60,000.

or profession (10 percent versus 4 percent, $p = 0.001$), and the relevance to politics and voting (26 percent versus 18 percent, $p = 0.025$), but *less* likely to mention their general desire to be well-informed (50 percent versus 62 percent, $p = 0.004$).

POLITICAL INVOLVEMENT. Respondents of different political ideologies differed only in how often they mentioned politics or voting as a reason for keeping informed. However, this difference appears to be more a matter of detachment than of ideology: nonpoliticals were substantially less likely to cite politics (only 8 percent did so) than either liberals (27 percent), conservatives (28 percent), or moderates (31 percent). Across these four categories, the χ^2 test of independence is highly significant ($\chi^2 = 52.4$, $p = 0.000$). Consistent with this, self-described voters were much more likely than nonvoters to cite politics or voting as a reason to keep informed (27 percent versus 12 percent, $p = 0.000$).

The Sources of Economic Information

The lengthiest part of the questionnaire inquired about the sources of information people use to inform themselves. As mentioned in the previous section, we asked about the frequency of use of each of eleven possible sources of information about economic issues, and we coded the responses as either “regularly or often,” “occasionally,” or “rarely or never.” Table 2 ranks the eleven sources from the most frequently used (television) to the least (books). It is hardly surprising that television is the most popular source of information—which it is by a substantial margin.

We followed this question by asking respondents whether they “learn more about economics from the networks, from cable, or about the same from both,” with the following results:

Network stations	17 percent
Cable stations	28 percent
About the same	44 percent.

Although it reaches many fewer viewers, cable has a noticeable edge.

Nor is it surprising that newspapers rank second as a source of economic information. But we would not have predicted that more people (54 percent) get their economic information from local newspapers than

Table 2. Sources of Information about Economic Policy by Frequency of Use ^a

Percent of sample

<i>Source</i>	<i>Regularly or often</i>	<i>Occasionally</i>	<i>Rarely or never</i>
Television	61	30	9
Newspapers	49	26	25
Friends or relatives	35	42	22
Political leaders ^b	35	40	25
Radio	26	23	50
Economists ^b	17	36	46
Internet	21	18	61
Business leaders ^b	12	31	57
Civic or religious leaders	10	27	62
Magazines	12	21	67
Books	7	14	79

Source: Authors' survey described in the text.

a. Numbers for each source may not sum to 100 percent because of rounding.

b. Information from these sources presumably is communicated via one or more of the other eight sources.

from any of the six national newspapers (23 percent) listed in the survey or from any other “big city” newspaper (19 percent).¹⁸ Remember, we preconditioned this response by first asking questions about *national* issues like the federal budget deficit and Social Security, not about the local school budget or personal finance. Finally, we inquired about which sections of the newspaper people “turn to, to learn about the economy or economic policy.” The business and financial (43 percent) and national news (39 percent) sections received the most votes, with the editorial page (including op-eds) lagging far behind (9 percent).

When we peer below first and second place in table 2, our priors on the rankings were pretty diffuse. “Discussions with friends and relatives” ranked third, narrowly edging out “statements by political leaders.” We were somewhat surprised to learn that radio is used so little, and we were quite surprised by the minimal use of magazines. (This includes the mass-circulation magazines like *Time* and *Newsweek*.) But we were gratified to find “statements by economists” ranking right in the middle of the eleven

18. The six national publications were the *New York Times*, the *Washington Post*, the *Wall Street Journal*, *USA Today*, the *Financial Times*, and *Investors' Business Daily*. Examples of “other big-city newspapers” were the *Boston Globe* and the *San Francisco Chronicle*. Coding of “national,” “big city,” and “local” newspapers was done by the survey takers, not by the respondents.

sources,¹⁹ beating out the Internet, business leaders, civic or religious leaders, magazines, and books.²⁰ Finally, table 2 probably underestimates the dominance of television, because many people probably hear the views of political leaders, economists, and business leaders on television, although some of this information also comes from radio, magazines, the Internet, and newspapers, of course.

We concluded the section on sources of information by reading back to each respondent the list of sources he or she had reported using “regularly or often” and then asking, “which . . . is your most important source of information on economics or economic policy?” By this alternative criterion, the ranking of sources is rather different (table 3). Television and newspapers still rank first and second, respectively, but the margin for television is now enormous. After that, the rankings in table 3 differ noticeably from those in table 2. For example, the Internet ranks much higher and, alas, economists rank much lower. Overall, the rank correlation between tables 2 and 3 is 0.76.

In a word, television tops the list of sources from which our respondents get their economic information; everything else lags well behind. But not all people are alike. As we did with the *reasons* for desiring to be informed, we next looked for statistically significant (at the 5 percent level) differences in the frequency of use of the sources of information by demographics, economic status, and political engagement. There were many, so we summarize them briefly.

DEMOGRAPHICS. Our χ^2 tests show that older respondents made significantly greater use of most, but not all, sources of information. But younger respondents used radio and the Internet more. Men reported making greater use of radio, business leaders, economists, and the Internet, whereas women reported greater use of civic or religious leaders. Racial differences were less common: whites used television more, and non-whites used magazines, books, and civic and religious leaders more.

EDUCATION AND ECONOMIC STATUS. We found significant differences by respondent’s level of education in the use of six of the eleven sources:

19. About one-sixth of the people who said they learn about the economy from economists “regularly” or “occasionally” specifically mentioned Alan Greenspan as the economist. We did not prompt that response.

20. Where the rankings of the distributions shown in table 2 were ambiguous, we broke the tie by assigning point scores as follows: regularly or often = 3, occasionally = 2, rarely = 1.

Table 3. Sources of Information about Economic Policy by Order of Importance^a
Percent of sample

<i>Source</i>	<i>Share of respondents reporting source as most important</i>
Television	46.7
Newspapers	18.6
Internet	10.0
Radio	8.9
Friends and relatives	6.6
Political leaders	2.3
Magazines	2.2
Civic or religious leaders	1.2
Business leaders	1.2
Economists	1.1
Books	0.5

Source: Authors' survey described in the text.

a. Numbers do not sum to 100 percent because of rounding.

radio, newspapers, magazines, business leaders, economists, and the Internet. In each case, college-educated people reported using the information source more. Similarly, higher-income respondents made significantly greater use of six sources: newspapers, radio, the Internet, political leaders, business leaders, and economists. Lower-income people used only one information source, statements by civic or religious leaders, more intensely than did higher-income people. Differences by employment status were less common; nonemployed people reported using books and the Internet more.

IDEOLOGY AND POLITICAL INVOLVEMENT. Although we found significant differences in information use by “ideology” in eight of the eleven cases, the differences did not typically cut across liberal-conservative lines. As a broad generalization, it was the nonpolitical group that stood apart from the rest by making less use of information. Similarly, for eight of the eleven sources, self-described voters were more likely to use the source than nonvoters.

Although the types of media used by liberals and conservatives are similar, we do find ideological differences in the particular newspapers that individuals choose to read. Table 4 shows, for each of the major newspapers as well as big-city and local papers, the proportion of people, classified by self-identified ideology, who obtain information about the

Table 4. Proportion of Respondents Who Read Selected Newspapers, by Ideology^a
Percent

Newspaper	Reported ideology				p value ^b
	Liberal	Conservative	Moderate	Have not thought about it	
<i>New York Times</i>	23	3	9	2	0.000
<i>Wall Street Journal</i>	5	10	9	3	0.001
<i>Washington Post</i>	6	1	1	0	0.000
<i>USA Today</i>	8	7	12	4	0.013
Other big-city paper	25	25	18	14	0.002
Local paper	44	55	56	56	0.066

Source: Authors' survey described in the text.

a. Columns may sum to more or less than 100 percent because respondents could offer more than one answer or no answer.

b. Probability that a constant proportion of respondents of all ideologies use the indicated source.

economy from that source.²¹ Liberals are a stunning eight times more likely than conservatives to read the *New York Times*, and conservatives are twice as likely as liberals to read the *Wall Street Journal*. But we did not find any ideological divide in the use of cable stations versus network television.²²

Finally, for use as empirical counterparts to the theoretical variable Q (quantity of information) in equation 2, we constructed two measures of how *intensively* each respondent used the various sources of information. Remember, each person was asked how often he or she used each source. Let s_1 , s_2 , and s_3 be, respectively, the number of sources a respondent reported using “regularly or often,” “occasionally,” and “rarely or never,” and let the total number of sources, s , equal $s_1 + s_2 + s_3$. (Note that s can be less than eleven because of item nonresponse.) Then define Q_H (“quantity high”) and Q_L (“quantity low”) as, respectively, s_1/s and s_3/s . Q_H and Q_L thus measure *intensity* of information use and *lack of intensity*, respectively. Because not all sources of information convey equal quantities of information, our measures are undoubtedly crude proxies, but they are probably still correlated with the extent to which individuals access information about the economy.

21. These numbers need not, and do not, mirror published circulation figures. For example, almost as many people report learning about the economy from the *New York Times* (8.2 percent) as from the *Wall Street Journal* (8.7 percent), even though the *Journal*'s (weekday) circulation is almost double that of the *Times*.

22. See Hamilton (2003) for an analysis of trends in “media bias” and the impact of competition on partisan news reporting.

Table 5. Frequency Distribution of High- and Low-Intensity Users of Information Sources^a

Range	Percent of respondents with Q_H (high intensity of information use) or Q_L (low intensity) in indicated range	
	Q_H	Q_L
$0.0 \leq Q < 0.1$	32.0	5.5
$0.1 \leq Q < 0.2$	19.6	7.6
$0.2 \leq Q < 0.3$	20.5	11.4
$0.3 \leq Q < 0.4$	13.2	16.5
$0.4 \leq Q < 0.5$	7.0	17.9
$0.5 \leq Q < 0.6$	3.9	15.1
$0.6 \leq Q < 0.7$	2.5	12.4
$0.7 \leq Q < 0.8$	0.9	7.5
$0.8 \leq Q < 0.9$	0.4	4.2
$0.9 \leq Q < 1.0$	0.03	1.9

Source: Authors' calculations using data from the survey described in the text.

a. Q_H is calculated as $s_1/(s_1 + s_2 + s_3)$, and Q_L as $s_3/(s_1 + s_2 + s_3)$, where s_1 , s_2 , and s_3 are the numbers of information sources that the respondent uses "regularly or often," "occasionally," and "rarely or never," respectively. Q_H and Q_L thus range from 0 to 1, with a higher Q_H indicating greater intensity of use of the identified sources generally, and a higher Q_L less intensity.

The distributions of these two variables in the overall sample are shown in table 5. Not surprisingly, the frequency distribution of Q_H (high intensity) is piled up at the low end: just 15 percent of respondents have a Q_H greater than 0.4, whereas 32 percent have a Q_H below 0.1. "Heavy" users of information are thus relatively rare. Perhaps more surprisingly, the distribution of the variable Q_L (low intensity) is *not* piled up at the high end: fewer than 14 percent of respondents have a Q_L above 0.7, whereas 73 percent have a Q_L between 0.2 and 0.7. This is rather more use of information than we might have expected.

Looking across personal characteristics, we found some of the empirical regularities that one might expect. College-educated people, high-income people, and self-professed voters reported significantly more intensive use of information sources. Compared with either liberals, conservatives, or moderates, the nonpoliticals had significantly lower Q_H and significantly higher Q_L . All these differences are significant well beyond the 0.1 percent level. The other personal characteristics—age, race, sex, and employment status—did not seem to matter much.²³

23. There were two minor exceptions. Whites had slightly higher average values of Q_L than nonwhites, and the employed had lower Q_L than the nonemployed.

Knowledge about Economic Issues

In the context of asking a series of questions about the five economic policy issues, we embedded nine “fact” questions whose purpose was to assess each respondent’s knowledge. The facts inquired about were

- the share of income that a typical family pays in taxes
- whether most people pay more in payroll or in income taxes
- the size of the federal budget deficit
- the level of the federal minimum wage
- the size of the average Social Security benefit check
- whether the respondent knew that President Bush had proposed partial privatization of Social Security
- whether the respondent knew that the Social Security system is projected to start running deficits in about a decade
- whether Medicare covered prescription drugs for outpatients (at the time of the survey)
- the percentage of Americans who do not have health insurance.

As a broad generalization and with exceptions to be noted shortly, we were surprised to find that the *average* responses to most of these questions were roughly correct (although the standard deviations were often huge). With one important exception—the federal budget deficit—there was also hardly any indication of skewness: the mean and median responses were close. Table 6 compares the correct answers to these fact questions with the survey results. Several comments are in order.

The correct tax share is a difficult question conceptually. Most economists think first of taxes as a share of GDP, which was 28.4 percent in 2002. But the denominator of this ratio (GDP) is meaningless to most people, and the numerator includes many taxes that people probably do not think of themselves as paying.²⁴ So we posed a more user-friendly version of the question:

“About what percentage of the typical American family’s income do you think goes to paying taxes—including all levels of government?”

24. Two prominent examples are the corporate income tax and the employer’s share of the payroll tax. This example illustrates a general and important point about public opinion polling. Economists often want to see survey questions that make sense *to them*. Such questions may involve complicated concepts and numerous provisos that leave ordinary people confused. Good poll questions need to be understandable by ordinary people with limited attention spans and no training in economics.

Table 6. Correct Answers to Factual Questions in the Survey and Answers Given by Respondents

<i>Question</i>	<i>Correct answer</i>	<i>Survey mean answer</i>	<i>Survey standard deviation</i>	<i>Survey median answer</i>
What percentage of its income does the typical American family pay in taxes?	23.3 ^a	31.3	15.6	30
Do most Americans pay more in income or in payroll taxes?	Payroll ^b	Income ^c	...	Income
How large is the current federal budget deficit? (in billions of dollars)	246–310 ^d	334	739	90
What is the current federal minimum wage? (in dollars)	5.15	5.86	1.27	5.65
How much is the average Social Security benefit check? (in dollars)	898	824	493	800
Did you know that President Bush has proposed partial privatization of Social Security?	...	Yes ^e	...	Yes
Did you know that Social Security is projected to begin running deficits in about a decade?	...	Yes ^f	...	Yes
Does Medicare cover prescription drugs for outpatients?	No ^g	No ^h	...	No
What percentage of Americans do not have health insurance?	15	37	16.7	35

Source: Authors' survey described in the text.

a. Calculated as personal income taxes, estate and gift taxes, the employee's share of the payroll tax, most sales and excise taxes, and property taxes on owner-occupied housing, summed and divided by personal income plus the employee share of the payroll tax.

b. When the employer share of the payroll tax is included, 83 percent of taxpayers pay more in payroll than in income tax; when it is excluded, the figure is 53 percent, according to Gale and Rohaly (2003).

c. Response given by 52 percent of respondents.

d. The lower and upper bounds on this range were, approximately, the official estimates published by the Congressional Budget Office on March 10 and May 9, 2003, respectively.

e. Response given by 56 percent of respondents.

f. Response given by 69 percent of respondents.

g. A Medicare prescription drug benefit was enacted in December 2003, after the survey was taken.

h. Response given by 54 percent of respondents (after excluding the 11 percent who did not answer the question).

In calculating the “correct” denominator for this ratio, we added the employee’s share of the payroll tax to personal income as defined in the National Income and Product Accounts (NIPA). For the numerator we included personal income taxes, estate and gift taxes, the employee’s share of the payroll tax, almost all sales and excise taxes, and property taxes on owner-occupied housing—all from the NIPA. But we *excluded* corporate income taxes, the employer’s share of the payroll tax, property taxes on rental housing, customs duties, and the excise tax on diesel fuel on the grounds that individuals are unlikely to think of themselves as pay-

ing those taxes. The resulting tax share in calendar 2001 was 23.3 percent; the share of the median family would be a bit lower. Thus we were left with two alternative interpretations of the mean survey response of 31.3 percent: it was either a small overestimate of the tax share of GDP or a substantial overestimate of our constructed tax share. We favor the latter interpretation. Note also that the standard deviation across respondents was very large: more than 15 percentage points.

About 53 percent of tax filers with wage income pay more in payroll taxes than they do in income taxes.²⁵ But our respondents, by a decisive margin of 52 percent to 35 percent, thought the reverse was true—that a majority of taxpayers pay more in income taxes than in payroll taxes.²⁶

Estimates of the federal budget deficit—whether for fiscal 2003 or 2004—were rising sharply while our survey was in the field. We therefore decided to count any number between \$246 billion and \$310 billion as correct; these were the official estimates published by the Congressional Budget Office (CBO) on March 10, 2003, and May 9, 2003, respectively.²⁷ In fact, the mean estimate in the survey (\$334 billion) was amazingly accurate, especially since private sector estimates at the time were running well above the CBO's estimates. However, the variance across respondents was truly astounding—we received estimates of the federal budget deficit as low as \$1 billion and as high as \$5 *trillion*. The median response—just \$90 billion—also showed that the “typical” response was far too low.²⁸

The average (and the median) estimate of the federal minimum wage was also quite accurate, especially when one considers that some respondents may have given the higher *state* minimum wage instead (as some explicitly did).²⁹

25. See Gale and Rohaly (2003). The 53 percent figure includes just the employee component of the payroll tax. If both the employer and the employee shares are considered, 83 percent of wage earners pay more in payroll taxes than in income taxes.

26. The remaining 13 percent said they did not know or thought they were about the same. Bartels (2003, p. 19) reports results from an NPR/Kaiser Foundation/Kennedy School survey that found that people are even more inaccurate in assessing whether *they themselves* pay more in income or in payroll taxes. To us, this suggests that many people simply do not distinguish between income and payroll taxes.

27. The May 9 CBO estimate was actually “over \$300 billion.”

28. The rate of nonresponse was also quite high on this question, at about 48 percent, suggesting that there was even less knowledge than the reported estimates indicate.

29. When we compute errors below, we use the state minimum wage as the true value if a respondent mentioned that he or she was reporting the state minimum wage.

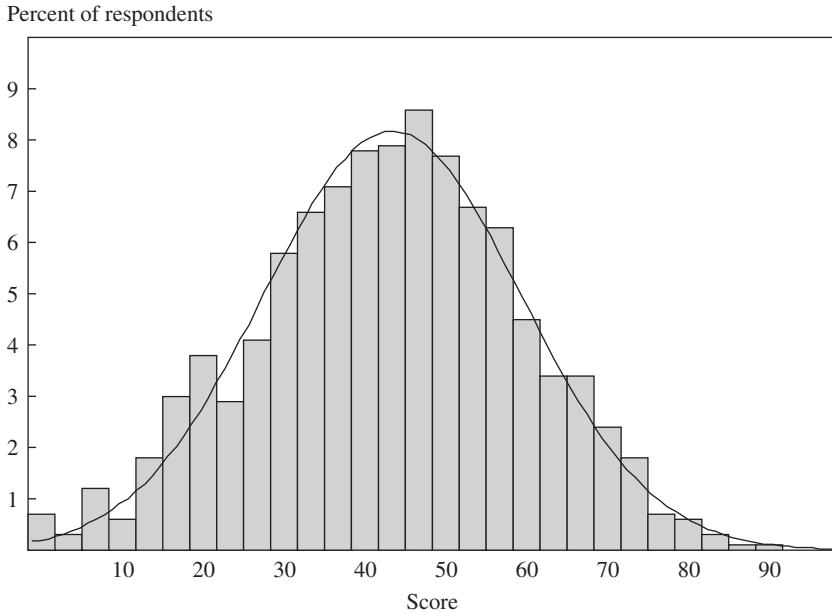
Average Social Security benefits were also estimated quite accurately in the survey, although the variance was again enormous, and fully 18 percent of respondents were unable to answer the question. Similarly, majorities of respondents said they were aware “that President Bush has proposed that part of Social Security be replaced by personal investment accounts” and “that the Social Security system is projected to start running deficits about a decade from now.” In general, public knowledge of the Social Security system seemed pretty high.

Not so for health insurance, however. A bare majority (54 percent) of those who answered the question realized that Medicare did not, at the time of the survey, cover prescription drugs “when people are not in the hospital”—this despite an avalanche of recent public attention to the issue.³⁰ And perhaps the greatest misconception in the survey was the belief that a stunning 37 percent (this was the mean response) “of Americans do not have any health insurance today.” The actual number in 2002 was 15.2 percent.

Each of the nine “knowledge” questions above will be used in context later, when we study public opinion on specific policy issues. But we also constructed a generic knowledge score—corresponding to the variable K in our model—as follows. Five of the questions have numerical answers. For each of these we computed the absolute error and then assigned each respondent a percentile rank based on accuracy, P_{ij} , where i indexes individuals and j indexes questions. We also assigned numerical scores to two qualitative questions (those on payroll versus income tax and on Medicare drug coverage), setting the values for the various answers so that the mean score was the 50th percentile (just like the numerical questions) and the standard deviation approximated that of a uniform distribution ($\sigma = 28.9$ percent). However, in computing our composite knowledge score, we gave only 50 percent weight to these two questions because it was easier to guess the correct answer. We excluded the two Social Security questions that began “Are you aware that. . .” on the grounds that the phrasing probably often “led the witness” to the correct answers. We then summed these ranks across all the (weighted) questions the respondent answered to obtain $K_i = (1/6) \sum_j P_{ij}$. Note that we

30. The 54-46 split excludes the 11 percent of respondents who did not answer the question.

Figure 1. Distribution of Knowledge Scores



Source: Authors' survey described in text.

always divide by six.³¹ The knowledge measure thus treats unanswered questions exactly as they would be treated on an exam: they get zero points. Strikingly, the distribution of our constructed knowledge variable across the population of respondents closely resembles a normal distribution, with a mean of 42.9 and a standard deviation of 16.7 (figure 1).

How does economic knowledge, thus measured, vary by personal characteristics, by the desire to keep informed, by the main sources of information, and by the number of information sources an individual uses? The rest of this subsection explores various dimensions of this question.

PERSONAL CHARACTERISTICS. There were no significant differences in mean knowledge score by age, and only minor differences by sex and race. Larger and more highly significant differences (all have p values

31. About half the sample was not asked for their estimate of the budget deficit. For them we summed the (weighted) ranks and divided by five instead.

Table 7. Respondents' Knowledge Scores by Reported Desire to Keep Well Informed

<i>Stated importance of keeping well informed</i>	<i>Mean knowledge score (percentile)^a</i>	<i>Share of sample (percent)</i>
Extremely important	43.8	23.8
Very important	43.3	50.2
Somewhat important	42.5	23.4
Not very important or not important at all	34.5	2.6

Source: Authors' survey described in the text.

a. See the text for description of how the knowledge score was calculated.

below 0.001) emerged when we considered economic status and political involvement:

—Higher-income people outscored lower-income people on our test by an average of 8.6 points (0.51σ). The scores of college-educated respondents averaged 6.3 points (0.38σ) higher than the scores of non-college-educated respondents. This is far smaller than the gap of 0.9σ recorded on the 1994 U.S. International Adult Literacy Survey; the difference is probably due to the fact that our assessment is based on just seven questions and the results are therefore noisy.³²

—Once again, the nonpolitical group stood out from the rest, with unusually low scores (about 6 or 7 points lower than liberals, conservatives, or moderates), and self-reported voters scored 8.5 points higher, on average, than nonvoters.³³

DIFFERENCES BY DESIRE TO KEEP INFORMED. It seems almost axiomatic that individuals who deem it more important to keep informed should actually *be* better informed. But the knowledge scores do not really bear this out, except for the lowest category (table 7). Although the ordering is as expected, the null hypothesis that all four mean scores are equal cannot be rejected at the 5 percent level ($p = 0.07$).

DIFFERENCES BY MAJOR SOURCE OF INFORMATION. Table 8 shows that the small number of people who said that magazines are their primary

32. As another point of comparison, Hansen, Heckman, and Mullen (forthcoming) find that scores on the Armed Forces Qualifying Test rise by 0.17 standard deviation for each year of schooling. The difference in years of schooling between college graduates and non-graduates is 4.5, so this amounts to a 0.77σ gap, or twice what we find for our test.

33. This result is consistent with Palfrey and Poole's (1987) results for political knowledge.

Table 8. Respondents' Knowledge Scores by Reported Most Important Source of Economic Policy Information^a

<i>Most important source</i>	<i>Mean knowledge score (percentile)^b</i>	<i>Share of sample (percent)^a</i>
Magazines	52.7	2.2
Economists	50.3	1.1
Newspapers	46.8	18.6
Business leaders	46.1	1.2
Internet	45.9	10.1
Books	43.7	0.5
Radio	42.3	8.9
Television	41.1	46.6
Political leaders	40.9	2.3
Friends and relatives	39.9	6.6
Civic or religious leaders	35.0	1.2

Source: Authors' survey described in the text.

a. Numbers do not sum to 100 percent because of rounding.

b. See the text for description of how the knowledge score was calculated.

source of information on economic issues (readers of *The Economist*?) were the most knowledgeable group, with a mean *K* score of 52.7. The even smaller number of people whose most important source of information was statements by economists ranked second (mean *K* = 50.3). The least knowledgeable people, by far, were the small group who rely most on statements by civic and religious leaders (mean *K* = 35.0). Those whose most important source was television—a plurality of the sample—had a relatively low mean *K* score of 41.1.

DIFFERENCES BY QUANTITY OF INFORMATION. Table 9 displays a positive, but by no means high, correlation between the knowledge score and the number of different sources that the respondent reports using regularly or often. Thus more information does improve knowledge, albeit very imperfectly. The null hypothesis that all the *K* scores are equal in table 9 is rejected at beyond the 0.1 percent level, but the relationship is not monotonic.

DIRECTION OF ERRORS. Our test scores are based on absolute errors, without regard to sign. But it has been suggested that conservatives and liberals may make systematically different errors because the two groups seek out and utilize different sources of information in order to see their beliefs confirmed.³⁴ Although conservatives and liberals had similar aver-

34. See Mullainathan and Shleifer (2003).

Table 9. Respondents' Knowledge Scores by Reported Number of Sources Used Regularly or Often

<i>No. of sources</i>	<i>Mean knowledge score (percentile)</i>	<i>Share of sample (percent)^a</i>
Five or more	45.5	14.4
Four	43.5	13.0
Three	46.1	20.9
Two	44.4	19.4
One	39.4	21.2
None	37.1	11.2

Source: Authors' survey described in the text.

a. Numbers do not sum to 100 percent because of rounding.

age percentile scores on the knowledge test, we did find some differences in the direction of their errors.

On average, conservatives thought that the federal budget deficit was much larger (\$333 billion versus \$177 billion), that Social Security benefits were a bit more generous (\$873 versus \$766 per month), and that a smaller share of the U.S. population lacked health insurance (32 percent versus 40 percent) than did liberals. Conservatives were also more likely than liberals to report being aware that the Social Security trust fund is projected to run a deficit in about a decade (82 percent versus 74 percent) and less likely to say that Medicare already provided coverage for prescription drugs (23 percent versus 34 percent). Although each of these differences is statistically significant, it is hard—for us at least—to see any clear pattern of ideological bias in these numbers. And on the other policy questions—regarding the tax share of income, whether the payroll tax is larger than the income tax, the value of the minimum wage, and whether respondents were aware of the Bush Social Security proposal—ideological differences were trivial and consistent with chance.

Opinions on Economic Policy Issues

As stated earlier, the survey instrument began with a series of questions about people's opinions on a variety of economic policy issues.

THE TAX BURDEN AND THE BUSH TAX CUTS. The first such question was

“Do you think taxes in the United States are generally too high, too low, or about right?”

This question was asked, on a randomized basis, either before or after the fact question about the tax share. The ordering of the two questions turned out not to affect the responses appreciably, and so we treated all the responses as a single sample. Some 61 percent of respondents said that taxes are too high, 36 percent said they are about right, 3 percent said they are too low, and 2 percent said they did not know.

The overwhelming popular sentiment that taxes are too high can hardly come as a shock to any sentient American. We have probably believed this since the 1770s. But the cross-tabulations by subsets of the population did hold some surprises. First, self-described conservatives (at 62 percent) were not much more likely than others (at 60 percent) to say that taxes are too high. Liberals, however, were notably less likely—just 48 percent did so. The most antitax group turned out to be the disengaged nonpoliticals, 70 percent of whom said taxes are too high. Second, although racial differences were not terribly sharp, nonwhites (at 70 percent) were more likely than whites (at 59 percent) to say that taxes are too high ($p = 0.036$). Third, lower-income people were *more* likely than higher-income people to say that taxes are too high (68 percent to 56 percent, $p = 0.001$).³⁵ Two other breakdowns were statistically significant: college-educated people were much *less* likely than others to say that taxes are too high (51 percent versus 65 percent, $p = 0.000$), and employed people were more likely than the nonemployed (65 percent versus 56 percent, $p = 0.033$) to have that opinion.

While our survey was in the field, Congress was debating President Bush's 2003 tax proposal (which subsequently passed) to advance the timing of the phased-in tax rate reductions enacted in 2001 and to establish a preferentially low tax rate on dividends. So we asked respondents whether they favored or opposed this proposal, ordering this opinion question (on a randomized basis) either before or after the fact question about whether the typical American pays more in payroll or income taxes (but always *after* the question about the typical family's tax share). In this case the answers did depend a bit on the ordering: asking the payroll tax question first *reduced* support for the Bush tax cut by about 5 percentage points. But a χ^2 test did not reject the null hypothesis of the independence of responses and question order ($p = 0.31$).

35. It has been suggested to us that even though the rich pay higher average tax rates, the utility loss from paying taxes may be proportionately greater for the poor.

Looking for differences by individual characteristics, we found that political ideology mattered quite strongly ($p = 0.000$). This time, conservatives were far more supportive of the Bush proposal (64 percent) than other groups (36 percent), even though, as just reported, they were no more likely to deem taxes too high. Both college-educated people (by 35 percent versus 23 percent of the non-college-educated) and self-reported voters (by 30 percent versus 19 percent of nonvoters) were more likely to oppose the 2003 Bush tax cuts ($p = 0.000$ and $p = 0.003$, respectively). And both whites (by a 46-to-33 percent margin) and higher-income people (by 50 to 35 percent) were much more likely to favor them ($p = 0.000$ in both cases). Finally, employed people favored the Bush tax cuts more than nonemployed people did. There were no significant differences by age or sex.

THE FEDERAL BUDGET DEFICIT. The next opinion question was

“How much of a problem do you think the federal budget deficit poses for the economy? Would you say it is not a problem at all, a minor problem, or a serious problem?”

We posed this question in two variants. For some respondents we asked it after first inquiring about the size of the deficit. For others we asked it after telling the respondent, “This year’s federal budget deficit is approximately \$300 billion. This works out to around \$3,000 per household.” Remember, the median estimate of those who were asked about the size of the deficit was only \$90 billion. So giving the \$300 billion figure framed the deficit at a higher level for most respondents.

Telling respondents the actual size of the deficit did have a marked effect on their responses, as table 10 shows. But, oddly, doing so *reduced* the fraction who thought the deficit is a serious problem, by about 9 percentage points. However, the χ^2 test for independence between order and response categories was only marginally significant ($p = 0.06$).

We followed this question with two further queries about public policy toward the deficit:

“Do you think the federal budget deficit ought to be reduced?”

and (for the 87.5 percent of the sample who answered “yes”)

“Do you think the deficit should be reduced mostly by raising taxes, mostly by cutting spending, or about equally by both means?”

Table 10. Respondents' Opinions on the Federal Budget Deficit^a

Opinion	Respondents told size of actual deficit ^b		All respondents
	Yes	No	
Deficit a serious problem	50	59	54
Deficit a minor problem	38	33	36
Deficit not a problem	5	3	4
Don't know	6	5	5

Source: Authors' survey described in the text.

a. Numbers may not sum to 100 percent because of rounding.

b. Approximately half of respondents were told, "This year's federal budget deficit is approximately \$300 billion. This works out to around \$3,000 per household." The rest were not given this information.

Our respondents divided approximately evenly between those who favored reducing the deficit "mostly by cutting spending" (45 percent) and those who favored doing so "about equally by both means" (47 percent), with a tiny minority (3 percent) favoring "mostly by raising taxes." (The other 5 percent gave no coherent opinion.) Several differences among subgroups were also observed.

Demographics. Older people and women were far more likely than younger people and men to rate the deficit "a serious problem," and by almost identical margins: 65 percent versus 50 percent ($p = 0.000$). But, ironically and perhaps inconsistently, this belief did not make them more likely to "think the federal budget deficit ought to be reduced." Nor were there significant sex or racial differences in the preferred cures for the deficit; however, older Americans favored expenditure cuts more than younger Americans did. Finally, although whites worried less about the budget deficit than did nonwhites, they were nonetheless slightly more likely to favor reducing the deficit.

Economic Status. The opinions of college-educated and non-college-educated respondents did not differ significantly on any of the three deficit-related questions. The same was true when we compared the employed with the nonemployed. However, lower-income people were considerably more likely than higher-income people to rate the deficit a serious problem (by 65 percent versus 53 percent, $p = 0.012$). That said, income did not significantly influence opinion on either of the other two deficit-related questions.

Political Involvement. Unsurprisingly, political ideology mattered quite a bit ($p = 0.000$). In a sign of these unusual times, liberals were far more likely to rate the budget deficit a serious problem (72 percent) than either conservatives (44 percent) or nonpoliticals (56 percent).³⁶ In this respect moderates (at 67 percent) were closer to liberals. Yet, once again, there were no significant differences by ideology in the fraction of people who “think the federal budget deficit ought to be reduced.” (Almost everyone does.) Ideology showed through strongly again ($p = 0.000$), however, when it came to selecting the preferred method for reducing the deficit: conservatives favored spending cuts over tax increases by a margin of 50 percent to 2 percent; among liberals the corresponding margin was 39 percent to 12 percent. (The disengaged nonpolitical group were like the conservatives in this respect. Moderates were in between.) Finally, self-reported voters and nonvoters did not differ much on any of the three deficit-related questions.

THE MINIMUM WAGE. Our next query was straightforward:

“Do you think the federal minimum wage should be increased?”

The answers overwhelmingly favored a higher minimum wage:

Yes	75 percent
No	21 percent
Don't know or refused	4 percent.

We posed this question either before or after asking people, on a randomized basis, what the current minimum wage is. But the ordering made no difference. We also disaggregated the sample by personal characteristics, with the following results.

Demographics. There were no significant differences in the answers to this question by age or employment status. But women and nonwhites were more likely to favor raising the minimum wage than men and whites—by margins of 81 percent to 69 percent ($p = 0.000$) for women

36. By contrast, an NBC/*Wall Street Journal* poll of 1,003 adults conducted in January 1995 found that 40 percent of conservatives identified the federal budget deficit as the most important economic issue facing the country, while only 23 percent of liberals did so. By a wide margin, the deficit was the issue most commonly cited by conservatives, but not by liberals (38 percent of whom cited unemployment) See Roper Center, Public Opinion Online Archive, University of Connecticut, Question ID USNBCWSJ.012095, R09A.

versus men and 93 percent to 74 percent ($p = 0.000$) for nonwhites versus whites.

Economic Status. College-educated people were less likely to favor a higher minimum wage than the non-college-educated (66 percent versus 83 percent, $p = 0.000$). Perhaps they learned about the alleged disemployment effects of the minimum wage in a college economics course!³⁷ And, as one would expect, lower-income people favored raising it more than higher-income people did (by a margin of 85 percent to 73 percent, $p = 0.001$).

Political Involvement. Not surprisingly, attitudes toward the minimum wage differed significantly by political ideology ($p = 0.000$). Conservatives, although still supportive (with 60 percent favoring), were far less likely to favor raising it than were all other groups (which were in the 85 to 89 percent approval range). Self-reported voters were also less likely to favor raising the minimum wage (74 percent versus 87 percent of nonvoters, $p = 0.000$).

SOCIAL SECURITY POLICY. In addition to the three fact questions mentioned above—pertaining to average Social Security benefits, the actuarial deficit, and President Bush’s partial privatization plan—we asked two policy questions about Social Security. First, immediately after asking, “Are you aware that President Bush has proposed that part of Social Security be replaced by personal investment accounts?” we posed the following policy question:

“Do you favor or oppose this idea, or are you undecided?”

Second, right after asking, “Are you aware that the Social Security System is projected to start running deficits about a decade from now?” we inquired,

“Do you think the government should try to reduce those deficits mainly by raising the payroll tax, mainly by reducing Social Security benefits, or both?”

Twenty percent of respondents favored partially replacing Social Security with personal accounts, whereas 38 percent opposed the idea and 42 percent were undecided. As for closing the future Social Security

37. The argument can be found in most beginning economics texts. For contrary evidence, see Card and Krueger (1995). A survey by Fuller and Geide-Stevenson (2003) in fall 2000 found that 46 percent of members of the American Economic Association “mainly agreed” that “Minimum wages increase unemployment among young and unskilled workers.” Twenty-seven percent disagreed, and 28 percent agreed with provisos.

deficit, respondents were roughly evenly divided between those who favored a mixture of both remedies (34 percent) and those who favored relying mainly on the payroll tax (30 percent). Only 5 percent wanted to rely mainly on benefit reductions, and a large 22 percent preferred neither remedy. Interestingly, this expressed preference for higher taxes over lower expenditure is just the reverse of what we found earlier, when we inquired about ways to reduce the overall budget deficit. Social Security, it appears, really is different. Looking across subgroups yielded the following findings.

Demographics. There were no significant racial differences on either Social Security policy question. Men were much more likely than women to favor partial privatization (28 percent versus 13 percent, $p = 0.000$), and they were less likely to favor tax increases to reduce the Social Security deficit (28 percent versus 38 percent, $p = 0.000$). But the biggest differences, as one would expect, came by age. Older people were much more likely than younger ones to oppose the privatization idea (46 percent versus 31 percent) and much less likely to be undecided (32 percent versus 50 percent). The curious consequence is that the proportion favoring the idea was roughly independent of age (about 20 percent). When it came to choosing between benefit cuts and tax increases as alternative ways to reduce the Social Security deficit, older Americans were more likely than younger ones (by 31 percent versus 18 percent) to choose “neither”—even though that option was not offered. Younger Americans were more likely (45 percent versus 29 percent) to opt for “both.” Both sets of differences are highly significant.

Economic Status. Higher-income people were much more likely to favor privatization (27 percent versus 12 percent of lower-income people, $p = 0.000$), as were the employed (24 percent versus 15 percent of the nonemployed, $p = 0.007$) and the college-educated (33 percent versus 16 percent of the non-college-educated, $p = 0.000$). Differences by education were interesting. The percentages of college-educated and non-college-educated respondents *opposing* the Bush privatization proposal were about the same (roughly 38 percent). But many fewer of the college educated were undecided (28 percent versus 46 percent). There were no significant differences on how best to reduce the looming Social Security deficit—no group wanted to see benefits cut.

Political Involvement. Ideology was pretty much a no-brainer on this issue: conservatives were vastly more likely to favor partial privatization

(40 percent) than either liberals (9 percent), moderates (18 percent), or nonpoliticals (8 percent). Those who claimed to have voted in the 2000 election were much more likely to favor privatization (25 percent versus 10 percent of nonvoters) and much less likely to be undecided (35 percent versus 54 percent). These differences are highly significant ($p = 0.000$). But, again, the subgroups did not differ significantly in how they want to reduce the Social Security deficit. Those who were aware of the president's proposal were more inclined to support it (by 31 percent versus 7 percent).

MEDICARE AND HEALTH INSURANCE. We asked people whether Medicare currently included an outpatient drug benefit. (It did not at the time of the survey.) We followed that query by asking those who answered correctly or who said there was presently only partial coverage (74 percent of all respondents),

“Would you favor or oppose adding a prescription drug benefit to Medicare for people who are not in the hospital, bearing in mind that it would have to be paid for somehow?”

Despite the last clause, which we deemed important, the general view was overwhelmingly supportive, with 80 percent in favor and only 12 percent opposed.³⁸ And opinions on this issue did not differ significantly by age (which we found surprising), sex, race, employment status, income, or self-reported voting behavior. College-educated people were a bit less likely to favor a Medicare drug benefit (by 82 percent versus 89 percent of the non-college-educated), but the difference was barely significant ($p = 0.033$). The only highly significant difference was by political ideology, but the ordering here was somewhat counterintuitive: The proportion favoring a Medicare drug benefit was 95 percent among liberals, 89 percent among nonpoliticals, 85 percent among conservatives, and 79 percent among moderates.

The other health policy question was

“Do you favor or oppose what is called universal health insurance coverage, meaning that the government would make sure that every American is covered by a health insurance policy?”

38. The rest did not know or gave no opinion. Of course, as was pointed out at the Brookings Panel meeting, we did not specify a *particular* way of paying for the drug benefit.

Remember, asking about the number of uninsured Americans elicited a gross *overestimate* of the extent of the problem. Such a misconception might be expected to *reduce* support for universal coverage, if respondents were thinking more about the high cost of reaching universal coverage, or *increase* support, if they were thinking more about the severity of the problem. In any case over 75 percent of our respondents favored universal coverage.³⁹ On this policy issue, differences of opinion across subgroups were the rule rather than the exception.

Demographics. Women were substantially more likely than men to favor universal health insurance (80 percent versus 71 percent, $p = 0.003$), and nonwhites were much more likely to favor it than whites (87 percent versus 72 percent, $p = 0.001$). But there were no significant differences by age.

Economic Status. Lower-income people were much more supportive of universal coverage than were higher-income people (who were probably covered in any case), by a margin of 85 percent to 70 percent ($p = 0.000$). And people without a college degree were significantly more likely than college graduates to favor universal coverage (78 percent versus 68 percent, $p = 0.001$). But, surprisingly, employment status did not matter.

Political Involvement. Politically disengaged nonvoters were much more likely to favor universal health insurance than were self-reported voters, by a margin of 85 percent to 71 percent ($p = 0.000$). Ideology mattered, too. Liberals strongly favored universal coverage (90 percent did so), whereas conservatives barely favored it (just 52 percent). Moderates (79 percent) and nonpoliticals (87 percent) fell in between, but much closer to the liberals ($p = 0.000$).

Econometric Models of Knowledge and Public Opinion

We return now to the five-equation model outlined earlier. Our primary interest is in equations like equation 1, which explain people's opinions

39. However, the ordering of the questions mattered significantly in this case. When the policy question was asked *before* the inquiry about the number of uninsured, our respondents favored universal health insurance by a margin of 74 percent to 22 percent. When the ordering of the questions was reversed, the margin fell to 67 percent to 25 percent. Getting people to think about the magnitude of the problem did suppress support a bit.

on policy issues (*OP*) by their self-interest (*SI*), ideology (*ID*), knowledge (*K*), education (*ED*), and other demographic controls (*X*). Recall that we identify the models by assuming a recursive structure. Readers unwilling to accept this assumption may be skeptical of our interpretation of the regression results (which is why we have reported only descriptive cross-tabulations up to now).

Does Information Breed Knowledge?

We begin with estimates of equation 2, which explains our admittedly imperfect measure of knowledge by information sources (the quantity and nature of sources used by respondents), the desire to be informed, education, and other demographic variables. We tried measuring respondents' sources of information in three different ways: by Q_H and Q_L , the two intensity-of-use variables defined earlier; by the respondent's primary source of information; and by a set of twenty-two dummy variables indicating, for each of the eleven sources, whether the respondent reported using that source at least occasionally. We found that, once demographics were controlled for, the twenty-two source dummies were jointly insignificant (at the 10 percent level). Therefore we eliminated the third option and concentrated on the other two.

Table 11 begins with the results of a linear regression with *K* on the left-hand side and only Q_H , Q_L , and the demographic variables on the right-hand side (column 11-1). The fit is mediocre (adjusted $R^2 = 0.17$), and Q_H and Q_L are jointly insignificant—a result anticipated by table 9. More-educated people, higher-income people, and married people are significantly more knowledgeable.

Column 11-2 adds a set of three dummies indicating (in descending order) the respondent's expressed desire to be informed. All three are significant at the 5 percent level, and the pattern of the coefficients means that people with more desire to be informed do obtain higher knowledge scores. But the adjusted R^2 barely increases.

In column 11-3 we add a set of variables identifying political ideology and engagement variables. Liberals, conservatives, and moderates (the control group) are no different in terms of knowledge. But people who have not thought about their ideology score significantly lower (although this finding is significant only at the 10 percent level). People who report having voted in 2000 score significantly higher.

Table 11. Regressions Explaining Respondents' Knowledge Scores^a

<i>Independent variable</i>	<i>11-1</i>	<i>11-2</i>	<i>11-3</i>
<i>Intensity of use</i>			
Ratio of number of sources used "regularly or often" to total sources used (Q_H)	4.85 (3.80)	4.41 (3.84)	2.94 (3.87)
Ratio of number of sources used "rarely or never" to total sources used (Q_L)	-2.11 (3.21)	-1.20 (3.21)	-0.13 (3.24)
p-value of joint significance of variables	0.13	0.28	0.67
<i>Desire to be informed^b</i>			
Extremely important	...	10.05*** (3.60)	7.91** (3.69)
Very important	...	8.44** (3.50)	6.83* (3.58)
Somewhat important	...	8.04** (3.55)	6.39* (3.64)
p-value of joint significance of variables	...	0.04	0.19
<i>Ideology and voting behavior^c</i>			
Liberal	...	...	-1.00 (1.78)
Conservative	...	...	-1.27 (1.55)
Has not thought much about ideology	...	...	-3.06* (1.61)
Other ideology	...	...	2.33 (2.81)
Voted in 2000	...	...	2.65** (1.31)
p-value of joint significance of variables	...	...	0.05
<i>Demographics</i>			
Log of income	1.96** (0.82)	2.07** (0.82)	2.01** (0.82)

(continued)

Finally, in a fourth regression not reported here, we added ten dummies representing sources of information, with the dummy equaling 1 when the respondent identified that source as the most important. Three of the ten coefficients (for newspapers, magazines, and economists) were significant at the 10 percent level, and each indicated higher scores than the base group (those who named television as their most important source). The F-test for the ten dummies as a group also indicated statistical significance ($F = 1.88$, $p = 0.045$). The other results hardly changed.

Thus our overall conclusion is that both education and the desire to be informed affect an individual's knowledge positively, although the mag-

Table 11. Regressions Explaining Respondents' Knowledge Scores^a (continued)

<i>Independent variable</i>	<i>11-1</i>	<i>11-2</i>	<i>11-3</i>
Age	0.00 (0.05)	0.00 (0.05)	-0.01 (0.05)
Years of education	1.25*** (0.24)	1.25*** (0.24)	1.01*** (0.26)
Female	-1.75 (1.09)	-1.86* (1.09)	-1.24 (1.10)
Black ^d	-2.33 (1.70)	-2.60 (1.70)	-2.87 (1.74)
Other race	-6.40*** (2.01)	-6.32*** (2.01)	-5.86*** (2.03)
Hispanic	0.38 (2.05)	0.30 (2.05)	0.40 (2.06)
Unemployed ^e	4.14* (2.39)	3.87 (2.38)	3.88 (2.40)
Retired	-1.12 (1.93)	-1.06 (1.93)	-1.22 (1.95)
Homemaker	-1.50 (2.47)	-1.43 (2.47)	-1.10 (2.47)
Student or other nonemployed	-0.38 (1.65)	-0.18 (1.65)	0.06 (1.68)
Married ^f	4.70*** (1.53)	4.15*** (1.54)	3.64** (1.55)
p-value of joint significance of variables	0.00	0.00	0.00
No. of observations	881	879	867
Adjusted R^2	0.17	0.18	0.19

Source: Authors' regressions using data from the survey described in the text.

a. The dependent variable is the respondent's knowledge score (see text for definition). Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level.

b. The omitted category is those who answered "Not important" or "Not very important."

c. The omitted category is "Moderate."

d. The omitted category is "White."

e. The omitted category is "Employed."

f. The model also included demographic controls for three other categories of marital status, not shown here.

nitude of the education effect is modest.⁴⁰ The nature of the respondent's primary source of information does affect his or her K score, but the general intensity of information use does not. Educators will find these results somewhat disheartening, although we acknowledge that the brief test embedded in our survey assesses only a limited range of *factual* knowledge—and that, even as such, the test is highly imperfect.

40. Four more years of education raises the test score by 4 or 5 points, or about one-quarter of a standard deviation.

Who Believes What? And Why?

For each of the five policy areas mentioned above, we now seek to estimate the relative roles of self-interest, ideology, and knowledge in forming public opinion—equation 1 in the model. In some sense this is the natural culmination of our inquiry, since information use and knowledge are, in this context, just way stations on the road to public opinion.

THE BUSH TAX CUTS. Because 31 percent of respondents offered intermediate responses (either a mixed opinion or no opinion) about the 2003 tax cut proposals, we estimated *ordered* probit models for opinion on the proposals with three choices: oppose, mixed response, or favor—in ascending order. Thus *positive* coefficients in table 12 indicate *more favorable* attitudes toward the Bush tax cuts. The magnitudes of the estimated coefficients in an ordered probit model are not easy to interpret, but the *relative* magnitudes are. For example, column 12-1 reports that the coefficient on the dummy variable for being black is almost ten times as large as the coefficient for years of education. That means that being black has roughly the same effect on the underlying probabilities as ten more years of education.

The estimates reported in table 12 are interesting and, for the most part, indicative of what we report later about opinions on other policy issues. Column 12-1 begins by trying to explain attitudes toward the tax cut by purely demographic variables, plus the logarithm of income. Since the 2003 tax cut proposal, unlike the 2001 tax cut, offered virtually no benefits to low- and moderate-income taxpayers, household income should be an excellent measure of *self-interest* here. The model does not explain much: the pseudo- R^2 measure of goodness-of-fit is below 0.02. Furthermore, virtually none of the demographic variables in column 12-1 matter. More-educated people and blacks are more opposed to the tax cuts, but little more than that can be said.⁴¹ (Remember, when we looked at simple correlations, several demographic variables were significant.) Although household income has the correct sign in all three models in table 12—that is, richer people do favor the tax cuts more—the coefficient is never significant. Where have you gone, *homo economicus*?⁴²

41. Among our four controls for marital status (not shown in the table), one is significant ($p = 0.01$): divorced and separated people are more likely to favor the Bush tax cuts.

42. Both Bartels (2003) and Slemrod (2003) emphasize the role of popular misconceptions in generating public opinion on tax policy in general and on the Bush tax cuts in

Table 12. Ordered Probit Model for Favoring Bush Tax Cut^a

<i>Independent variable</i>	<i>Regression</i>		
	<i>12-1</i>	<i>12-2</i>	<i>12-3</i>
<i>Self-interest</i>			
Log of income	0.09 (0.06)	0.10 (0.07)	0.11 (0.08)
p-value of joint significance of variable	0.13	0.160	0.147
<i>Ideology and political behavior</i>			
Liberal	...	-0.41*** (0.15)	-0.43*** (0.15)
Conservative	...	0.70*** (0.13)	0.60*** (0.14)
Has not thought much about ideology	...	0.03 (0.13)	-0.02 (0.14)
Other ideology	...	-0.27 (0.23)	-0.45* (0.24)
Voted in 2000	...	-0.11 (0.11)	-0.06 (0.12)
Believes taxes too high	...	0.57*** (0.10)	0.63*** (0.10)
Believes taxes too low ^b	...	-0.70** (0.30)	-0.78** (0.31)
Likes progressivity	...	-0.16* (0.09)	-0.08 (0.10)
p-value of joint significance of variables	...	0.000	0.000

(continued)

Column 12-2 adds a host of ideology and knowledge variables. Many of them are significant, and the pseudo- R^2 jumps dramatically to 0.12.⁴³ The table also reports χ^2 tests (whose p-values are reported below each set of regressors), which clearly show that both ideology and knowledge are strongly associated with opinions on the tax cuts.

Ideology is measured both by political ideology, as discussed above, and by opinions on whether the tax burden is too high or too low and whether taxes should be progressive.⁴⁴ Column 12-2 shows that ideology matters quite a lot. Conservatives are much more favorably disposed

particular. Slemrod finds that more-educated people suffer somewhat less from these misconceptions.

43. This is not an entirely clean comparison, since the sample size drops from 874 to 722 observations because of missing data.

44. The precise question is, "Do you agree or disagree with the statement that higher-income households should pay a larger share of their income in taxes than lower-income households?"

Table 12. Ordered Probit Model for Favoring Bush Tax Cut^a (continued)

<i>Independent variable</i>	<i>Regression</i>		
	<i>12-1</i>	<i>12-2</i>	<i>12-3</i>
<i>Knowledge</i>			
Knowledge score	...	-0.012*** (0.003)	-0.011*** (0.003)
Answer on typical family's tax share	...	-0.09 (0.30)	0.09 (0.31)
Believes income tax larger for most	...	-0.12 (0.09)	-0.13 (0.10)
p-value of joint significance of variables	...	0.005	0.006
<i>Opinion on federal deficit^c</i>			
Deficit a serious problem	...	...	-0.70*** (0.24)
Deficit a minor problem	...	...	-0.24 (0.24)
p-value of joint significance of variables	...	...	0.000
<i>Demographics</i>			
Years of education	-0.037** (0.018)	0.017 (0.022)	0.020 (0.023)
Age	-0.001 (0.004)	0.0007 (0.0043)	0.0031 (0.0045)
Female	0.017 (0.082)	-0.05 (0.09)	0.004 (0.098)
Black	-0.35*** (0.12)	-0.26* (0.15)	-0.22 (0.16)
Other race	0.004 (0.156)	-0.11 (0.18)	-0.07 (0.18)
Hispanic	0.20 (0.16)	0.38** (0.18)	0.41** (0.18)
Unemployed	-0.15 (0.17)	-0.002 (0.21)	0.09 (0.21)
Retired	-0.004 (0.146)	0.01 (0.17)	-0.04 (0.18)
Homemaker	0.13 (0.19)	0.27 (0.22)	0.23 (0.23)
Student or other nonemployed	-0.17 (0.12)	-0.13 (0.14)	-0.05 (0.15)
p-value of joint significance of variables	0.004	0.162	0.239
No. of observations	874	722	697
Log-likelihood	-921	-680	-645
Pseudo-R ²	0.018	0.12	0.14

Source: Authors' regressions using data from the survey described in the text.

a. The dependent variable is the respondent's opinion on the federal tax cut proposed in 2003, where "favored" = 3, a mixed response = 2, and "did not favor" = 1. See table 11, notes e-f, for more detail about the specification. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

b. The omitted category is "Believes taxes about right."

c. The omitted category is "Deficit not a problem."

toward the tax cuts, and liberals much more opposed (compared with the base group, which was moderates). Similarly, those who think taxes are too high are vastly more likely to favor the Bush tax proposal than are those who think taxes are too low.⁴⁵ (In this case, the omitted group is those who answered that taxes are “about right.”) Finally, those who believe taxes should be progressive are less likely to favor the Bush proposal, although this coefficient becomes insignificant in the model in column 12-3.

We measure *knowledge* in two ways: general knowledge and knowledge specific to tax policy. Our constructed *K* score measures general knowledge. Specific knowledge about taxes is measured by the estimated tax share and by whether the respondent knew that most people pay more in payroll taxes than in income taxes. (Recall that these two indicators of specific knowledge are also part of the general knowledge score.) Although general knowledge matters in the estimated model, specific knowledge about taxes does not—and most of the coefficients appear to be incorrectly signed. (The finding about general knowledge is the one result in table 12 that is *not* typical of what is to come.) The a priori “correct” sign on the coefficient of *K* is unclear, since the composite score measures knowledge of facts, not of economic theory, labor supply elasticities, or anything like that. But people with more factual knowledge about the economy apparently are less supportive of the Bush tax cut proposal, *ceteris paribus*.

In column 12-3 we add a pair of dummy variables for whether the respondent believes the budget deficit is a major problem or a minor problem (the omitted category is “no problem at all”). It seems obvious that views on this question should influence support for the Bush tax cuts—and they do. However, the standard identification assumption may be difficult to sustain in this case. It seems quite possible that some unmeasured influence (call it “liking George W. Bush”) that makes a respondent favor the Bush tax cut also makes him or her downplay the importance of budget deficits. Hence some readers may prefer to ignore column 12-3. Fortunately, including or excluding these two variables does not change the other coefficients much.

45. Readers can decide for themselves whether they want to think of this as an “ideology” variable but should recall that the regression already controls for the estimated tax share.

REDUCING THE FEDERAL BUDGET DEFICIT. As mentioned, we began the deficit part of the questionnaire by asking all respondents how much of a problem they think the federal budget deficit poses.⁴⁶ We ordered the three possible responses in ascending order of concern about the deficit: no problem at all, a minor problem, or a serious problem. Positive coefficients in the ordered probit estimates of table 13 thus indicate greater concern.

As the reader may recall, about half the respondents were asked how large they think the deficit is, but fewer than half answered the question. So, although it seems sensible to use the estimated deficit as a regressor, doing so would shrink the sample by more than three-quarters. For this reason table 13 presents only regressions that *exclude* the estimated deficit variable. Suffice it to say that equations that included the estimated deficit showed that people who think the deficit is larger are more worried about it, and that including the estimated deficit did not change the signs of the other coefficients.

As before, we start with an initial model that includes only demographic variables plus the only *self-interest* variable we could think of for the deficit issue, namely, income, which becomes insignificant once we control for ideology (see column 13-2). The fit is poor, although better than in table 12. Women, blacks, older people, and more-educated people are more concerned about the deficit (the last group barely so).

The *ideology* variables, which are added in column 13-2, are more interesting, and adding them more than doubles the pseudo- R^2 . Conservatives are less concerned about the deficit than are liberals and moderates, and those with “other” ideologies look a lot like conservatives in this respect. Similarly, people who favor progressive taxation—another way to identify liberals?—are significantly more concerned. People who think taxes are too high are *more* worried about the deficit (column 13-3), whereas people who think taxes are too low are *less* worried. (The first of these coefficients is significant at the 5 percent level, but the second is not.) This finding may indicate that many respondents expect the eventual cure for the deficit problem to be higher taxes. When it comes to *knowledge*, neither our composite score nor specific knowledge about taxes affects opinion on the deficit significantly.

46. A more direct policy question was also asked—whether the respondent thought the deficit should be reduced—but the vast majority of respondents answered yes, making the answers rather uninteresting to analyze.

Table 13. Ordered Probit Model for Opinion on the Federal Deficit^a

<i>Independent variable</i>	<i>Regression</i>		
	<i>13-1</i>	<i>13-2</i>	<i>13-3</i>
<i>Self-interest</i>			
Log of income	-0.17** (0.07)	-0.11 (0.08)	-0.08 (0.08)
p-value of joint significance of variables	0.01	0.16	0.30
<i>Ideology and political behavior</i>			
Liberal	...	0.01 (0.16)	-0.01 (0.16)
Conservative	...	-0.53*** (0.13)	-0.62*** (0.14)
Has not thought much about ideology	...	-0.19 (0.15)	-0.24 (0.15)
Other ideology	...	-0.46* (0.24)	-0.51** (0.25)
Voted in 2000	...	0.07 (0.12)	0.10 (0.13)
Believes taxes too high	...	...	0.20** (0.10)
Believes taxes too low ^b	...	...	-0.31 (0.26)
Likes progressivity	...	0.30*** (0.10)	0.34*** (0.10)
p-value of joint significance of variables	...	0.00	0.00
<i>Knowledge</i>			
Knowledge score	...	0.001 (0.004)	0.002 (0.004)
Answer on typical family's tax share	...	0.003 (0.003)	0.003 (0.003)
Believes income tax larger for most	...	-0.02 (0.10)	-0.00 (0.10)
p-value of joint significance of variables	...	0.81	0.84
<i>Survey design</i>			
Respondent not told deficit size ^c	0.20** (0.09)	0.18* (0.10)	0.17* (0.10)
p-value of joint significance of variables	0.02	0.07	0.08
<i>Demographics</i>			
Years of education	0.03* (0.02)	0.01 (0.02)	0.01 (0.02)
Age	0.009** (0.004)	0.010** (0.005)	0.010** (0.005)
Female	0.24*** (0.09)	0.37*** (0.10)	0.34*** (0.10)
Black	0.35** (0.15)	0.43** (0.18)	0.40** (0.18)

(continued)

Table 13. Ordered Probit Model for Opinion on the Federal Deficit^a (continued)

<i>Independent variable</i>	<i>Regression</i>		
	<i>13-1</i>	<i>13-2</i>	<i>13-3</i>
Other race	0.19 (0.17)	0.16 (0.19)	0.15 (0.19)
Hispanic	0.16 (0.17)	0.16 (0.19)	0.12 (0.19)
Unemployed	0.15 (0.20)	0.36 (0.24)	0.33 (0.24)
Retired	-0.24 (0.16)	-0.21 (0.19)	-0.20 (0.19)
Homemaker	-0.24 (0.20)	-0.40* (0.22)	-0.26 (0.23)
Student or other nonemployed	.10 (0.14)	.25 (0.16)	.30* (0.16)
p-value of joint significance of variables	0.00	0.00	0.00
No. of observations	842	716	701
Log-likelihood	-661	-535	-516
Pseudo-R ²	0.04	0.09	0.10

Source: Authors' regressions using data from the survey described in the text.

a. The dependent variable is the respondent's opinion on the deficit as a problem, where "serious problem" = 3, "minor problem" = 2, and "not a problem" = 1. See table 11, notes e-f, for more detail about the specification. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

b. The omitted category is "Believes taxes about right."

c. The variable equals 1 if the respondent was not told the size of the deficit before being asked whether the deficit was a problem.

Opinions vary greatly on the *methods* that should be used to reduce the deficit. Here we estimated two probit models, both shown in table 14, including only the subset of respondents who said the deficit ought to be reduced. Since the choices were "raising taxes," "cutting spending," or "both," we created two binary variables:

Taxes = 1 if the respondent chose raising taxes or both
= 0 otherwise,

and

Spending = 1 if the respondent chose cutting spending or both
= 0 otherwise,

and we estimated an ordinary probit model for each. The model for "Spending" is less interesting, however, since almost everyone thinks

Table 14. Binary Probit Models for Views on How to Reduce the Deficit*

Independent variable	Dependent variable = 1 when respondent holds indicated view, 0 otherwise					
	Raising taxes is part of solution			Cutting spending is part of solution		
	14-1	14-2	14-3	14-4	14-5	14-6
<i>Self-interest</i>						
Log of income	-0.022 (0.073)	-0.031 (0.074)	-0.073 (0.085)	0.165 (0.109)	0.200* (0.115)	0.220 (0.138)
p-value of joint significance of variables	0.077	0.679	0.385	0.130	0.082	0.112
<i>Ideology and political behavior</i>						
Liberal	...	-0.027 (0.158)	-0.072 (0.174)	...	-0.612*** (0.224)	-0.685*** (0.257)
Conservative	...	-0.197 (0.138)	-0.104 (0.151)	...	0.237 (0.239)	0.061 (0.269)
Has not thought much about ideology	...	-0.278 (0.145)	-0.217 (0.160)	...	0.247 (0.258)	0.140 (0.299)
Other ideology	...	-0.408** (0.264)	-0.435 (0.282)	...	-0.624* (0.324)	-0.818** (0.368)
Voted in 2000	...	0.022 (0.118)	0.050 (0.133)	...	-0.347* (0.213)	-0.501* (0.258)
p-value of joint significance of variables	...	0.278	0.584	...	0.000	0.001
<i>Knowledge</i>						
Knowledge score	...	-0.005* (0.003)	-0.008* (0.004)	...	-0.005 (0.005)	-0.005 (0.007)
Answer on typical family's tax share	...	...	0.000 (0.004)	...	...	0.008 (0.007)
Believes income tax larger for most	...	...	-0.340*** (0.108)	...	...	-0.097 (0.184)
p-value of joint significance of variables	...	0.095	0.007	...	0.316	0.372

(continued)

Table 14. Binary Probit Models for Views on How to Reduce the Deficit^a (continued)

Independent variable	Dependent variable = 1 when respondent holds indicated view, 0 otherwise					
	Raising taxes is part of solution			Cutting spending is part of solution		
	14-1	14-2	14-3	14-4	14-5	14-6
<i>Opinions on taxes</i>						
Likes progressivity	...	...	0.063 (0.110)	...	...	-0.004 (0.196)
Believes taxes too high	...	...	-0.630*** (0.116)	...	...	0.521*** (0.191)
Believes taxes too low ^b	...	...	0.525 (0.330)	...	...	-0.668** (0.338)
p-value of joint significance of variables	...	...	0.000	...	...	0.002
<i>Demographics</i>						
Years of education	-0.012 (0.021)	-0.028 (0.023)	-0.049* (0.026)	-0.098*** (0.032)	-0.047 (0.037)	-0.013 (0.043)
Age	-0.011** (0.004)	-0.010** (0.004)	-0.010** (0.005)	-0.006 (0.007)	-0.003 (0.007)	0.006 (0.009)
Female	-0.059 (0.097)	-0.096 (0.099)	-0.090 (0.109)	0.076 (0.152)	0.048 (0.164)	0.130 (0.186)

Black	-0.143 (0.153)	-0.167 (0.184)	-0.163 (0.227)	-0.061 (0.249)	-0.237 (0.297)
Other race	0.167 (0.186)	0.108 (0.209)	0.023 (0.280)	-0.111 (0.295)	-0.227 (0.323)
Hispanic	0.093 (0.188)	-0.079 (0.213)	-0.091 (0.275)	0.002 (0.297)	-0.077 (0.312)
Unemployed	0.036 (0.211)	-0.344 (0.245)	-0.278 (0.299)	-0.309 (0.321)	-0.449 (0.349)
Retired	0.256 (0.176)	0.092 (0.206)	0.204 (0.282)	0.091 (0.296)	0.119 (0.353)
Homemaker	0.155 (0.225)	0.090 (0.255)	-0.110 (0.359)	-0.143 (0.378)	-0.171 (0.444)
Married	-0.117 (0.136)	-0.210 (0.156)	0.248 (0.196)	0.229 (0.211)	0.226 (0.239)
Student or other nonemployed	0.317** (0.148)	0.163 (0.174)	-0.239 (0.208)	-0.255 (0.223)	-0.041 (0.268)
p-value of joint significance of variables	0.005	0.062	0.135	0.886	0.841
No. of observations	780	662	780	771	662
Log-likelihood	-523	-414	-185	-166	-132
Pseudo- R^2	0.031	0.038	0.056	0.135	0.199

Source: Authors' regressions using data from the survey described in the text.

a. Dependent variables are defined in the text. See table 11, notes e-f, for more detail about the specification. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

b. The omitted category is "Believes taxes about right."

spending cuts should be part of the solution, whereas our respondents split almost 50-50 on whether higher taxes should be part of the solution.

What do we find? Beginning with *self-interest*, higher-income people are slightly less likely to favor raising taxes and slightly more likely to favor cutting spending. But neither coefficient is generally significant. Thus, once again, self-interest seems to matter little. In this case *ideology* also matters rather less than might be expected: liberals and people of “other” ideologies are far less likely to favor cuts in spending. Naturally, people who believe that taxes are already too high are far *less* likely to favor the tax-hike alternative and far *more* likely to favor spending cuts, and those who think taxes are too low tend to hold the opposite views. Self-professed voters are less enthusiastic about cutting spending and a bit more enthusiastic about raising taxes than are nonvoters, but the coefficients are not always significant. Respondents with higher levels of general economic *knowledge* are marginally less likely to favor tax hikes. And those who (wrongly) believe that income taxes are typically larger than payroll taxes are much less enamored of tax hikes. Among the demographic variables, the only consistently significant effect is that older people are less likely to favor raising taxes.

RAISING THE MINIMUM WAGE. Table 15 displays results from a series of ordinary (binary) probit models to explain support for raising the minimum wage. Separating *self-interest* from some of the *demographic* determinants of opinion is tricky in this case because our survey offers no direct information on respondents’ wage rates. We do, however, have data on several obvious correlates of wages, such as income, race, sex, and education—all of which show up as significant determinants of opinion in column 15-1. In each case the sign of the coefficient is consistent with the simple hypothesis that lower-wage people are more likely to favor raising the minimum wage than higher-wage people. Apart from these potential wage proxies, the demographic variables are insignificant.

Following the pattern of previous tables, columns 15-2 and 15-3 add ideology and knowledge variables to the model. Although *ideology* once again contributes notably to explaining opinion, only conservatives stand out from the pack in being less favorably disposed toward raising the minimum wage.

The *knowledge* variables are more interesting. General knowledge is irrelevant, but people who guessed high on the question about the existing minimum wage are decidedly less likely to support raising it. Similarly,

Table 15. Binary Probit Model for Supporting Minimum Wage Increase^a

<i>Independent variable</i>	<i>Regression</i>		
	<i>15-1</i>	<i>15-2</i>	<i>15-3</i>
<i>Self-interest</i>			
Log of income	-0.22*** (0.08)	-0.19** (0.09)	-0.28*** (0.10)
p-value of joint significance of variables	0.03	0.08	0.011
<i>Ideology and political behavior</i>			
Liberal	...	0.12 (0.19)	0.19 (0.22)
Conservative	...	-0.48*** (0.15)	-0.39** (0.17)
Has not thought much about ideology	...	0.10 (0.17)	0.10 (0.20)
Other ideology	...	-0.09 (0.29)	-0.06 (0.32)
Voted in 2000	...	-0.03 (0.14)	-0.24 (0.17)
p-value of joint significance of variables	...	0.000	0.002
<i>Knowledge</i>			
Knowledge score	...	0.004 (0.004)	-0.001 (0.004)
Answer on current value of minimum wage	...	...	-0.18*** (0.06)
p-value of joint significance of variables	...	0.34	0.006
<i>Opinion on effect of rise in minimum wage</i>			
A lot will lose jobs	...	...	-1.73*** (0.25)
Some will lose jobs	...	...	-0.95*** (0.13)
p-value of joint significance of variables	...	...	0.002
<i>Demographics</i>			
Years of education	-0.08*** (0.02)	-0.09*** (0.03)	-0.07** (0.03)
Age	-0.002 (0.005)	0.001 (0.005)	-0.008 (0.006)
Female	0.42*** (0.11)	0.39*** (0.12)	0.47*** (0.13)
Black	1.18*** (0.29)	1.05*** (0.30)	1.13** (0.46)
Other race	0.40* (0.22)	0.38 (0.23)	0.34 (0.26)
Hispanic	0.23 (0.23)	0.17 (0.24)	0.34 (0.27)
Unemployed	-0.04 (0.26)	-0.14 (0.26)	0.41 (0.31)

(continued)

Table 15. Binary Probit Model for Supporting Minimum Wage Increase^a (continued)

<i>Independent variable</i>	<i>Regression</i>		
	<i>15-1</i>	<i>15-2</i>	<i>15-3</i>
Retired	-0.17 (0.20)	-0.20 (0.20)	-0.02 (0.23)
Homemaker	0.09 (0.26)	0.10 (0.26)	0.16 (0.30)
Student or other nonemployed	-0.14 (0.18)	-0.14 (0.18)	-0.37* (0.21)
p-value of joint significance of variables	0.000	0.000	0.000
No. of observations	838	823	761
Log-likelihood	-380	-364	-284
Pseudo- <i>R</i> ²	0.13	0.16	0.29

Source: Authors' regressions using data from the survey described in the text.

a. The dependent variable is whether the respondent favors increasing the minimum wage, where "yes" = 1 and "no" = 0. See table 11, notes c-f, for more detail about the specification. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

those who believe that a higher minimum wage would cause the loss of either "a lot of" jobs (6 percent of the sample) or "some" jobs (36 percent) are much less likely to favor raising it than are those who believe that "hardly anyone" would lose their job (57 percent of the sample). Comparing columns 15-2 and 15-3 shows that these three variables measuring specific knowledge contribute enormously to the goodness of fit.

The minimum wage is arguably the one policy that we have examined where a good case can be made that self-interest—or at least group interest—and economic beliefs and knowledge are as strong an influence on public opinion as ideology. For example, when the estimated coefficients shown in column 15-3 are translated into marginal effects on probabilities, we find that self-identified conservatives are 13 percentage points less likely than liberals to support a minimum wage increase. Similarly, support for an increase is 14 points higher among blacks than among whites, 16 points higher among those in the poorest 15 percent of households than among those in the richest 15 percent, 10 points higher among women than among men, and an impressive 58 points lower among those who believe that a lot of workers will lose their jobs from a higher minimum wage than among those who believe very few will lose their job.

SOCIAL SECURITY POLICY. We asked two questions about Social Security policy: whether respondents supported President Bush's plan for par-

tial privatization, and how (if at all) the looming Social Security deficit should be reduced.

Where Social Security was concerned, we included several novel *self-interest* variables, in addition to income, in the survey (top panel of table 16). Broadening the concept of *self-interest* just a bit, we asked whether the respondent's mother, father, or both were still alive. We also asked respondents whether they expected Social Security to be a "major source" of their own retirement income, a "minor source," or "not much of a source at all." Presumably, people in the first category have a much greater stake in the outcome of the Social Security debate. Older workers should also have more of a stake in the current system.

When it comes to attitudes toward personal accounts, the subjective self-interest measure of anticipated Social Security income is significant, whereas the more objective ones—income, whether the parents are alive, and age—have inconsistent and weak effects, although they are sometimes significant in the expected direction. The χ^2 tests for the entire group of self-interest variables show statistical significance beyond the 1 percent level in columns 16-2 and 16-3, and the importance of Social Security benefits in retirement income is significant in all specifications.

The *knowledge* variables—whether general or specific to Social Security—make little contribution to explaining opinions on privatizing Social Security. As noted earlier, respondents who were aware of President Bush's proposal are more likely to support it, but the difference is not significant ($p = 0.19$). More-educated people are slightly more likely to favor partial privatization.

Political *ideology* matters much more than knowledge. Not surprisingly, conservatives are much more likely to back privatization and liberals more likely to oppose it.

In the questions about how to reduce the actuarial deficit, the choices were "mainly by raising the payroll tax" (chosen by 30 percent of respondents), "mainly by reducing Social Security benefits" (5 percent), or "both" (34 percent).⁴⁷ We created two dummy variables analogous to those for deficit reduction policy:

$$\begin{aligned} \text{SS-Taxes} &= 1 \text{ if the respondent chose raising payroll taxes or both} \\ &= 0 \text{ otherwise,} \end{aligned}$$

47. We excluded those who did not answer (9 percent of the sample) and those who said "neither" (22 percent).

Table 16. Ordered Probit Model for Favoring Personal Investment Accounts within Social Security^a

<i>Independent variable</i>	<i>Regression</i>		
	<i>16-1</i>	<i>16-2</i>	<i>16-3</i>
<i>Self-interest</i>			
Log of income	0.15** (0.06)	0.11 (0.07)	0.11 (0.07)
Age	0.004 (0.004)	-0.008 (0.005)	-0.009* (0.005)
Both parents alive	0.18 (0.12)	0.05 (0.13)	-0.04 (0.13)
Only mother alive	0.06 (0.14)	0.03 (0.15)	0.05 (0.15)
Only father alive ^b	0.01 (0.20)	-0.15 (0.24)	-0.14 (0.24)
Expects Social Security to be major income source	-0.22* (0.12)	-0.40*** (0.13)	-0.36*** (0.14)
Expects Social Security to be minor income source ^c	-0.17* (0.10)	-0.31*** (0.11)	-0.30** (0.11)
p-value of joint significance of variables	0.06	0.004	0.003
<i>Ideology and political behavior</i>			
Liberal	...	-0.38*** (0.15)	-0.40*** (0.15)
Conservative	...	0.87*** (0.13)	0.87*** (0.13)
Has not thought much about ideology	...	0.31** (0.14)	0.34** (0.14)
Other ideology	...	-0.12 (0.23)	-0.18 (0.24)
Voted in 2000	...	0.04 (0.11)	0.02 (0.11)
p-value of joint significance of variables	...	0.000	0.000
<i>Knowledge</i>			
Knowledge score	...	0.003 (0.003)	0.002 (0.003)
Answer on monthly Social Security benefit	...	0.09 (0.09)	0.10 (0.09)
p-value of joint significance of variables	...	0.35	0.41
<i>Other knowledge</i>			
Aware of Bush personal accounts proposal	...	...	0.13 (0.10)
Aware of projected Social Security deficit	...	...	0.05 (0.11)
p-value of joint significance of variables	...	...	0.36

(continued)

Table 16. Ordered Probit Model for Favoring Personal Investment Accounts within Social Security^a (continued)

<i>Independent variable</i>	<i>Regression</i>		
	<i>16-1</i>	<i>16-2</i>	<i>16-3</i>
<i>Demographics</i>			
Years of education	0.03 (0.02)	0.05** (0.02)	0.05** (0.02)
Female	-0.26*** (0.08)	-0.15 (0.09)	-0.11 (0.10)
Black	-0.16 (0.13)	-0.07 (0.16)	-0.06 (0.16)
Other race	-0.04 (0.15)	-0.24 (0.17)	-0.25 (0.17)
Hispanic	0.15 (0.15)	0.34** (0.17)	0.34** (0.17)
Unemployed	-0.05 (0.18)	0.07 (0.19)	0.03 (0.19)
Retired	-0.10 (0.15)	-0.03 (0.17)	-0.02 (0.17)
Homemaker	0.18 (0.18)	0.14 (0.20)	0.12 (0.20)
Student or other nonemployed	-0.06 (0.13)	-0.04 (0.15)	-0.06 (0.15)
p-value of joint significance of variables	0.19	0.22	0.38
No. of observations	862	736	731
Log-likelihood	-883	-713	-706
Pseudo- <i>R</i> ²	0.03	0.10	0.10

Source: Authors' regressions using data from the survey described in the text.

a. The dependent variable is the respondent's opinion on the Bush administration proposal to replace part of Social Security with private individual accounts, where "favors" = 3, "undecided" = 2, and "opposes" = 1. See table 11, notes c-f, for more detail about the specification. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

b. The omitted category is "Neither parent alive."

c. The omitted category is "Expects Social Security to be not much of a source [of retirement income] at all."

and

$$SS\text{-Spending} = 1 \text{ if the respondent chose cutting benefits or both} \\ = 0 \text{ otherwise,}$$

and we ran binary probit models for each. The results are displayed in table 17.

Our ability to explain people's opinions on this important public policy issue is quite modest (pseudo-*R*²s are in the 0.06 to 0.07 range in both cases). Surprisingly, and in contrast to the results in table 16, the six *self-interest* variables are not significant determinants of opinion, either individually or as a group, once political ideology variables are included. Nor

Table 17. Binary Probit Models for How to Reduce the Social Security Deficit^a

<i>Independent variable</i>	<i>Dependent variable = 1 when respondent holds indicated view, 0 otherwise</i>					
	<i>Raising taxes is part of solution</i>			<i>Cutting benefits is part of solution</i>		
	17-1	17-2	17-3	17-4	17-5	17-6
<i>Self-interest</i>						
Log of income	-0.088 (0.078)	-0.143 (0.088)	-0.121 (0.090)	0.099 (0.073)	0.064 (0.082)	0.072 (0.083)
Age	-0.007 (0.005)	-0.003 (0.006)	-0.002 (0.006)	-0.009* (0.005)	-0.007 (0.006)	-0.007 (0.006)
Both parents alive	0.093 (0.153)	0.071 (0.165)	0.107 (0.170)	0.229 (0.145)	0.140 (0.156)	0.108 (0.159)
Only father alive	-0.341 (0.243)	-0.027 (0.282)	0.088 (0.292)	-0.350 (0.251)	-0.315 (0.276)	-0.371 (0.280)
Only mother alive ^b	0.167 (0.176)	0.117 (0.182)	0.125 (0.184)	0.285* (0.166)	0.208 (0.171)	0.162 (0.173)
Expects Social Security to be major income source	0.477*** (0.147)	0.268 (0.171)	0.322* (0.176)	0.100 (0.137)	-0.074 (0.159)	-0.063 (0.162)
Expects Social Security to be minor income source ^c	0.214* (0.119)	0.158 (0.133)	0.166 (0.135)	-0.071 (0.115)	-0.086 (0.127)	-0.064 (0.128)
p-value of joint significance of variables	0.015	0.563	0.566	0.005	0.222	0.282
<i>Ideology and political behavior</i>						
Liberal	...	0.122 (0.183)	0.105 (0.187)	...	0.188 (0.173)	0.207 (0.175)
Conservative	...	-0.106 (0.155)	-0.115 (0.159)	...	0.142 (0.149)	0.128 (0.152)
Has not thought much about ideology	...	-0.001 (0.175)	0.001 (0.177)	...	0.293 (0.163)	0.296* (0.164)
Other ideology	...	-0.663** (0.281)	-0.652** (0.294)	...	-0.112 (0.290)	-0.102 (0.299)

Voted in 2000	...	0.121 (0.140)	0.102 (0.142)	...	0.090 (0.131)	0.104 (0.132)
p-value of joint significance of variables	...	0.122	0.196	...	0.485	0.465
<i>Knowledge</i>						
Knowledge score	...	-0.008** (0.004)	-0.009** (0.004)	...	0.001 (0.004)	0.001 (0.004)
Answer on monthly Social Security benefit ^d	...	0.009 (0.010)	0.007 (0.011)	...	0.017* (0.010)	0.017* (0.010)
Aware of Bush personal accounts proposal	...	-0.204 (0.130)	-0.198 (0.132)	...	-0.252** (0.122)	-0.265** (0.123)
Aware of projected Social Security deficit	...	0.210 (0.148)	0.233 (0.149)	...	-0.064 (0.136)	-0.057 (0.137)
p-value of joint significance of variables	...	0.066	0.054	...	0.100	0.093
<i>Other opinions</i>						
Believes taxes too high	...	...	-0.252** (0.118)	...	...	0.171 (0.110)
Believes taxes too low ^e	...	...	-0.149 (0.288)	...	...	0.191 (0.277)
p-value of joint significance of variables	...	...	0.100	...	...	0.278
<i>Demographics</i>						
Years of education	0.036 (0.023)	0.007 (0.027)	0.003 (0.028)	-0.062*** (0.022)	-0.041 (0.027)	-0.035 (0.027)
Female	0.269*** (0.105)	0.163 (0.118)	0.155 (0.120)	-0.238** (0.099)	-0.368*** (0.113)	-0.369*** (0.115)
Black	0.157 (0.169)	0.168 (0.211)	0.182 (0.212)	0.295* (0.153)	0.173 (0.187)	0.148 (0.188)
Other race	-0.038 (0.194)	-0.006 (0.211)	0.091 (0.220)	-0.239 (0.185)	-0.267 (0.200)	-0.248 (0.203)
Hispanic	0.352* (0.208)	0.277 (0.219)	0.200 (0.223)	0.307* (0.187)	0.367* (0.197)	0.360* (0.198)

(continued)

Table 17. Binary Probit Models for How to Reduce the Social Security Deficit* (continued)

<i>Independent variable</i>	<i>Dependent variable = 1 when respondent holds indicated view, 0 otherwise</i>					
	<i>Raising taxes is part of solution</i>			<i>Cutting benefits is part of solution</i>		
	<i>17-1</i>	<i>17-2</i>	<i>17-3</i>	<i>17-4</i>	<i>17-5</i>	<i>17-6</i>
Unemployed	0.602** (0.280)	0.795** (0.318)	0.821** (0.323)	-0.077 (0.216)	-0.009 (0.226)	-0.023 (0.227)
Retired	-0.289 (0.186)	-0.100 (0.206)	-0.167 (0.210)	-0.167 (0.186)	-0.046 (0.201)	-0.037 (0.204)
Homemaker	-0.197 (0.229)	-0.247 (0.240)	-0.321 (0.244)	-0.079 (0.221)	-0.117 (0.235)	-0.079 (0.239)
Student or other nonemployed	-0.075 (0.160)	-0.074 (0.181)	-0.089 (0.185)	-0.345** (0.151)	-0.375** (0.174)	-0.342** (0.176)
p-value of joint significance of variables	0.029	0.318	0.268	0.005	0.021	0.049
No. of observations	793	676	664	793	676	664
Log-likelihood	-451	-377	-366	-509	-432	-425
Pseudo-R ²	0.063	0.069	0.075	0.060	0.065	0.065

Source: Authors' regressions using data from the survey described in the text.

a. Dependent variables are defined in the text. The order in which questions about the deficit were asked is also controlled for. See table 11, notes e-f, for more details of the specification. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

b. The omitted category is "Neither parent alive."

c. The omitted category is "Expects Social Security to be not much of a source [of retirement income]" at all.

d. Divided by 100.

e. The omitted category is "Believes taxes about right."

does *ideology* itself matter very much. (The χ^2 statistics are insignificant in all cases.)

Knowledge does matter, however. Respondents with higher general knowledge scores are a bit less likely to favor raising the payroll tax, and people with higher estimates of the average monthly Social Security benefit are, surprisingly, *less* likely to want to cut them. (But the coefficient is barely significant at the 10 percent level.) Interestingly, those who said they were aware of President Bush's privatization proposal are significantly (at the 5 percent level) less willing to cut Social Security benefits.

On the *demographics*, women and students are significantly less inclined to cut benefits, whereas Hispanics are more inclined (but the coefficient is barely significant). Unemployed people are decidedly less enthusiastic than others about raising payroll taxes.

HEALTH INSURANCE POLICY. Our last two policy questions pertain to health insurance. As discussed above, we asked respondents whether they favored adding a prescription drug benefit to Medicare and whether they favored universal coverage.

In addition to age and income, the survey included what we believed would be useful *self-interest* variables tailored to these questions. As already noted, we asked whether the respondent's parents were alive; we also asked whether the respondent or anyone in his or her immediate family was uninsured. We begin with table 18, which displays the results for an ordinary probit model of opinion on universal health insurance coverage.

Higher-income people are significantly more opposed to universal coverage ($p = 0.000$), and uninsured respondents are more likely to favor it ($p = 0.004$ in column 18-1, but $p = 0.108$ in column 18-2).⁴⁸ However, neither age nor having an uninsured family member affects one's opinion. The coefficients on own insurance coverage imply that people who lack health insurance are more likely to support universal coverage (by 12 percentage points in column 18-1 and 8 points in column 18-2). As usual, measures of political *ideology* are successful as regressors. Liberals are far more likely to favor universal coverage, and conservatives are much more likely to oppose it. Interestingly, self-reported voters are less likely

48. Our results indicate more of an impact of self-interest on support for universal health insurance than has been found in previous research. For example, Sears and others (1980) find that a respondent's support for government-funded national health insurance is unrelated to his or her own health insurance coverage.

Table 18. Binary Probit Model for Favoring Universal Health Insurance^a

<i>Independent variable</i>	<i>Regression</i>	
	<i>18-1</i>	<i>18-2</i>
<i>Self-interest</i>		
Log of income	-0.42*** (0.09)	-0.30*** (0.10)
Uninsured	0.56*** (0.20)	0.35 (0.22)
Family member uninsured	-0.11 (0.18)	-0.15 (0.20)
p-value of joint significance of variables	0.000	0.005
<i>Ideology and political behavior</i>		
Liberal	...	0.58*** (0.22)
Conservative	...	-0.77*** (0.17)
Has not thought much about ideology	...	0.15 (0.20)
Other ideology	...	-0.48 (0.30)
Voted in 2000	...	-0.40** (0.17)
p-value of joint significance of variables	...	0.000
<i>Knowledge</i>		
Knowledge score	...	0.002 (0.005)
Answer on percent of Americans uninsured	...	0.009*** (0.005)
p-value of joint significance of variables	...	0.12

(continued)

to favor universal coverage. *Knowledge* appears to have a modest effect on opinions on universal coverage. The general knowledge score is irrelevant, as usual. But people with higher estimates of the uncovered population are a bit more likely to favor universal coverage.⁴⁹ Finally, demographic variables do not seem to matter—not even age. Column 18-1 indicates that blacks are more likely than whites to favor universal coverage, but the coefficient becomes insignificant once ideology and knowledge are added to the equation (column 18-2).

49. The coefficient implies that a 10-percentage-point increase in the presumed uncovered population is associated with a 3-percentage-point increase in support for universal health insurance.

Table 18. Binary Probit Model for Favoring Universal Health Insurance (continued)

<i>Independent variable</i>	<i>Regression</i>	
	<i>18-1</i>	<i>18-2</i>
<i>Demographics</i>		
Years of education	-0.02 (0.03)	-0.01 (0.03)
Age	0.001 (0.005)	.004 (0.006)
Female	0.21* (0.11)	0.08 (0.13)
Black	0.62*** (0.23)	0.28 (0.25)
Other race	-0.05 (0.21)	-0.21 (0.24)
Hispanic	0.38* (0.23)	0.23 (0.25)
Unemployed	-0.08 (0.23)	-0.22 (0.31)
Retired	-0.15 (0.21)	-0.15 (0.24)
Homemaker	0.12 (0.26)	0.08 (0.29)
Student or other nonemployed	0.24 (0.19)	0.18 (0.22)
p-value of joint significance of variables	0.03	0.17
No. of observations	761	674
Log-likelihood	-356	-287
Pseudo- R^2	0.12	0.21

Source: Authors' regressions using data from the survey described in the text.

a. The dependent variable is whether the respondent favors universal health insurance, where 1 = "yes" and 0 = "no." See table 11, notes c-f, for more details of the specification. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

Table 19 explores the determinants of public opinion about adding a prescription drug benefit to Medicare; we limit the sample to respondents who, at the time of the survey, knew that Medicare did not cover prescription drugs. Here *demographics* matter more than it does on most other policy issues. Blacks and more-educated people are far less likely to support such a benefit, whereas students are much more likely to support it. The results on self-interest, ideology, and knowledge are by now familiar: *self-interest* and *knowledge* are not significant determinants of opinion, but political *ideology* is. In particular, liberals and respondents with "other" (than liberal, conservative, or moderate) ideology are substantially more likely to support a prescription drug benefit. So are self-professed voters, at least in two of the three specifications.

Table 19. Ordered Probit Model for Favoring Prescription Drug Insurance in Medicare^a

<i>Independent variable</i>	<i>Regression</i>		
	<i>19-1</i>	<i>19-2</i>	<i>19-3</i>
<i>Self-interest</i>			
Log of income	0.100 (0.119)	0.100 (0.119)	0.107 (0.128)
Age	-0.008 (0.007)	-0.007 (0.008)	-0.016* (0.008)
Both parents alive	-0.010 (0.220)	0.022 (0.221)	-0.111 (0.231)
Only father alive	0.297 (0.470)	0.306 (0.465)	0.083 (0.480)
Only mother alive ^b	-0.250 (0.236)	-0.284 (0.237)	-0.350 (0.245)
p-value of joint significance of variables	0.524	0.453	0.240
<i>Ideology and political behavior</i>			
Liberal	1.064*** (0.295)	1.069*** (0.294)	0.766** (0.313)
Conservative	0.143 (0.187)	0.152 (0.186)	-0.127 (0.209)
Has not thought much about ideology	0.312 (0.204)	0.360* (0.206)	-0.182 (0.239)
Other ideology	1.068** (0.544)	1.069** (0.542)	0.640 (0.564)
Voted in 2000	0.374** (0.185)	0.432** (0.187)	0.192 (0.210)
p-value of joint significance of variables	0.002	0.001	0.023
<i>Knowledge</i>			
Knowledge score	...	0.003 (0.005)	0.005 (0.005)
Believes Medicare already partly covers drugs ^c	...	...	0.079 (0.199)
p-value of joint significance of variables	...	0.559	0.587

(continued)

Conclusion

Taken as a whole, our survey results hold little good news for those of us engaged in economic education or economic policy—or for economic theorists who use *homo economicus* as the backbone of their models of political economy.

Table 19. Ordered Probit Model for Favoring Prescription Drug Insurance in Medicare^a (continued)

<i>Independent variable</i>	<i>Regression</i>		
	<i>19-1</i>	<i>19-2</i>	<i>19-3</i>
<i>Demographics</i>			
Years of education	-0.095*** (0.034)	-0.099*** (0.035)	-0.140*** (0.038)
Female	0.197 (0.153)	0.236 (0.155)	0.086 (0.170)
Black	-0.589** (0.231)	-0.594** (0.232)	-0.506 (0.261)
Other race	-0.012 (0.295)	-0.138 (0.304)	-0.260 (0.326)
Hispanic	-0.100 (0.293)	-0.027 (0.301)	-0.209 (0.322)
Student or other nonemployed	1.056*** (0.386)	1.040*** (0.383)	1.131** (0.517)
Unemployed	-0.130 (0.317)	-0.156 (0.317)	-0.326 (0.336)
Retired	0.009 (0.257)	0.050 (0.260)	0.434 (0.286)
Homemaker	-0.015 (0.342)	-0.028 (0.340)	0.270 (0.377)
Married	0.440** (0.221)	0.398* (0.220)	0.213 (0.243)
p-value of joint significance of variables	0.002	0.001	0.001
No. of observations	629	626	567
Log-likelihood	-206	-202	-176
Pseudo-R ²	0.128	0.133	0.139

Source: Authors' regressions using data from the survey described in the text.

a. The dependent variable is the respondent's opinion on enactment of a prescription drug benefit within Medicare, where "favors" = 3, "no answer" = 2, and "opposes" = 1. The sample includes only those who answered (correctly) that Medicare did not cover prescription drugs outside of the hospital for Medicare patients at the time of the survey, or who said coverage was only partial. See table 11, notes c-f, for more detail about the specification. Equations also control for order of questions. Standard errors are in parentheses. ***denotes significantly different from zero at the 1 percent level, ** at the 5 percent level, * at the 10 percent level.

b. The omitted category is "Neither parent alive."

c. The sample excludes those who said they believed that Medicare already provided full prescription drug coverage.

On the positive side, a large majority of a representative national sample of Americans does express a strong desire to be well informed about major economic policy issues. And their factual knowledge is, on average, reasonably good. From where does their information come? The short answer is television, followed at a (long) distance by local (rather than national) newspapers. Unfortunately, as a source of information,

television does far better on quantity than on quality. For example, it ranks eighth among the eleven possible sources of information in its contribution to our constructed measure of economic knowledge, although we recognize that one can question the direction of causality here. Perhaps more disconcerting, economic knowledge is barely higher among those people who use more sources of information, use information more intensively, or express a stronger desire to be informed than do others. On the other hand, people with more education and more income are more knowledgeable.

As a broad generalization—some exceptions to which we have noted—ideology seems to play a stronger role in shaping opinion on economic policy issues than either self-interest or knowledge, although specific (as opposed to general) knowledge does influence opinion on a number of matters.⁵⁰ This finding is not terribly different from the conclusion reached by Victor Fuchs, Krueger, and James Poterba in their survey of professional economists:⁵¹ left-right ideology seemed to shape opinion more than parameter estimates did. The contrast with *homo economicus*—who is well informed, nonideological, and extremely self-interested—could hardly be more stark. Instead, our findings seem more consistent with an idea expressed in the political science literature, namely, that people often use ideology as a short-cut heuristic for deciding what position to take, when properly informing oneself is difficult.⁵²

In closing, we offer two speculative explanations for this basic finding: confusion and generosity of spirit. Both explanations start from the premise that people typically develop conventional (“ideological”) beliefs about how the world works and about what is good for them and for the commonweal. Thereafter the two explanations diverge. The confusion explanation emphasizes how misperceptions of their own self-interest can lead people to act (or, in the case of our respondents, to speak) against their best interests.⁵³ The generosity explanation emphasizes that, at least

50. Of course, our K variable measures knowledge with considerable error, which probably biases its coefficient downward.

51. Fuchs, Krueger, and Poterba (1998).

52. See, for example, Lupia (1994).

53. Bartels (2003) and Slemrod (2003) fall squarely within this camp. Romer (2003) provides a start at modeling political outcomes under the assumption that voters have systematic misperceptions.

when it comes to national economic policy, people are often more interested in what they perceive to be the common good than they are in their own narrow self-interest.⁵⁴ In both cases there is at least room for hope that greater knowledge will improve decisionmaking, even though it appears from our survey that efforts in this dimension have shown less than impressive results to date.

54. See Caplan (2002) and the essays in Mansbridge (1990) for further discussion of how group interests affect public opinion and voting.

Comment and Discussion

William D. Nordhaus: In a democracy, one might suppose, the decisions of elected politicians are to some extent influenced by public opinion. This is the motivation for the question, which Alan Blinder and Alan Krueger address in this paper, of how public opinion and, specifically, public opinion about economic affairs is determined.

Blinder and Krueger investigate the state of economic knowledge and preferences among the general public by tracking down a random sample and asking them a battery of fact questions (to determine their knowledge), personal questions (to determine their self-interest), and economic policy questions (to see where they stand on the issues of the day). No one should be surprised to learn that the authors have gone about this task in a thoughtful manner and have produced many interesting findings. The survey has been carefully administered, and the response rate is high. My comments will raise a number of questions about their questions, which leave me thinking that survey research is even harder than I originally imagined.

To begin with, one might ask whether the respondents behave like the textbook *homo economicus classicus*. Somewhere, someone probably believes that economic policy opinions are formed by continuous-time maximization of a consistent preference function maximizing the present value of the utility of consumption using Bayesian updating in light of the constant inflow of data from the Internet, several televisions tuned to the financial channels, and a live feed from the Brookings Panel. But anyone who still entertains that notion will quickly discard it after reading this paper.

What do we learn about the public's economic opinions? In reality, public opinions about the economy in a democracy are the outcome of a very complex process in which people try to sort through conflicting accounts and theories, often provided by unreliable narrators. The news contains much factual reporting (including the Dow Jones average to seven significant digits), but very little analytical reporting. Analyses are often shaded by political motives (if by public figures), by profit motives (if by companies), or by desire for publicity (if by private individuals). Even a good news source such as PBS's Jim Lehrer NewsHour feels it has to present a balanced point of view, where "balanced" means someone is there to defend supply-side economics.

Americans report that, of all professions, they trust nurses most and car salesmen and HMO managers least.¹ Canadians report that they trust pharmacists most and national politicians least (only 9 percent of Canadians trust the latter).² Yet people get much of their economic knowledge from national politicians and little from nurses and pharmacists. I suspect that most people view getting economic information somewhat akin to extracting a referral from their HMO. Given the difficulties of knowing whom to trust and the contentiousness of most policy discussions, it would not be surprising if the public is confused at best and ill informed at worst.

How do Blinder and Krueger attack this issue? They administer a battery of nine fact questions to see how their respondents have sorted through the varieties of conflicting opinions. I admit that I found some of the questions vaguely unsatisfying, partly because recall of numerical facts is not identical with sound economic analysis.

In addition, I found myself constantly worrying about the questions. For example, on taxes the question was

"About what percentage of the typical American family's income do you think goes to paying taxes—including all levels of government?"

This is actually a very hard question. Does "typical" mean median or average or what the respondent thinks is a typical nuclear family? Should

1. "Matter of Trust: HMOs Get Little," *Managed Care* (January 2004), www.managedcaremag.com/archives/0401/0401.news_trust.html.

2. "So, Whom Do We Trust?" Toronto: Ipsos-Reid (January 22, 2003), www.acpa.ca/press_news/2003/trust.pdf.

I be economically sophisticated and include production taxes and business taxes in the numerator, as a good public finance theorist would recommend and a good Chicago economist would predict? (Blinder and Krueger would not.) Should I include imputed rent on my owner-occupied house in the denominator as the Bureau of Economic Analysis does? (Blinder and Krueger do, but I doubt that most Americans would.) What do we learn from an incorrect answer to this question? Apparently, survey respondents shared some of my confusions, for they grossly over-estimated the typical share of taxes paid by households.

In addition to the knowledge questions, people were asked a number of public policy questions. For example:

“Are you aware that President Bush has proposed that part of Social Security be replaced by personal investment accounts?”

followed by

“Do you favor or oppose this idea, or are you undecided?”

I would be surprised if most people had much knowledge of this proposal. I, for one, have forgotten the details, and perhaps even President Bush would have trouble explaining it clearly. The term “personal investment accounts” has a nice ring to it, and I personally am in favor of them. In fact, I think I already have a few of them. More of a problem is that the term is embedded in a question that states that personal accounts are a Bush proposal, so the question is probably heard as, “President Bush has made a new proposal called personal investment accounts; how do you feel about President Bush and his proposals?” Under this interpretation, it is not a question about Social Security but about attitudes toward Bush.

Economists are always complaining about questions that are posed without the context of the trade-offs involved. The most careful work in this area comes from environmental economists who have designed contingent valuation studies to learn about the value of pristine Alaskan waters or of preserving whooping cranes. The lesson from these studies is that one must be very careful to specify both the “commodity” and the “price” to have any hope that the responses will be meaningful.

Blinder and Krueger are inconsistent in this respect. For example, when querying about drug benefits, they ask

“Would you favor or oppose adding a prescription drug benefit to Medicare for people who are not in the hospital, bearing in mind that it would have to be paid for somehow?”

It is definitely good to bear in mind that the proposed benefit would have to be paid for. But “somehow” is a little vague. It does not explain the payment method, and so it does not really confront the respondent with a realistic choice. The average respondent might assume that “somehow” means “by someone else,” as in former Senator Russell Long’s ditty, “Don’t tax you, don’t tax me, tax that fellow behind the tree.”

Even worse in this regard is the question on national health insurance:

“Do you favor or oppose what is called ‘universal health insurance coverage,’ meaning that the government would make sure that every American is covered by a health insurance policy?”

It is not surprising that a great majority of people favor such a policy when no price tag or tax tag is attached. I favor universal health insurance. I would guess most of the Brookings Panel favor it, whatever it is. But it would be better to tease out preferences with something like:

“The next question is about health insurance. One proposal is to extend the Medicare program to all U.S. residents. Statisticians estimate that this proposal could be financed with a tax of \$2,500 per family. Would you favor or oppose such a proposal?”

The questions on fiscal policy are potentially the most illuminating, given the widespread support of the American people for tax cuts. Here Blinder and Krueger begin with the following:

“Do you think taxes in the United States are generally too high, too low, or about right?”

They find that most people think taxes are too high (71 percent) and virtually none (3 percent) think they are too low. I agree with most people. I think my taxes are too high. I also think that airplanes are too crowded, teenagers are too noisy, cell phones are a nuisance, and there are too many SUVs. But these opinions, like the view that taxes are too high, are of little relevance because the relevant budget constraints are nowhere in sight.

I mentioned above that people overestimate the typical tax rate. Is it possible that people overestimate the size of things they dislike? Recall that various surveys have found that people want to reduce U.S. spending on foreign aid, but at the same time they estimate that U.S. spending on foreign aid is 20 percent of the budget (an overestimate by about a factor

of twenty).³ Do people think taxes are too high because they constantly hear that taxes are a menace to the Republic rather than that taxes are the price of a civilized society? People may want lower taxes in return for larger deficits, but would they want lower taxes in return for lower Social Security benefits, fewer police, dirtier streets, and more crowded classrooms?

Blinder and Krueger also ask whether respondents favored the Bush tax cuts. The most important determinants of the answers are political philosophy (liberal versus conservative) and whether the respondent thought taxes were too high or too low to begin with. Self-interest and demographic variables (in the form of income) play a very modest role. Instead, what can roughly be thought of as ideology is the key determinant of attitudes on central political issues such as tax cuts.

A similar pattern of responses is seen on the questions about the importance of the federal budget deficit as a problem and how to solve it. Whether people thought taxes were part of the solution depended chiefly on whether they were conservative or liberal and on whether they thought taxes were too high to begin with. Here I worry a little about causality. Am I conservative because I don't like taxes, or do I dislike taxes because I'm conservative? If the label I attach to myself describes my constellation of views, what do we learn from these regressions? Don't we really need to go a step further and find out *why* I dislike taxes? All this may suggest that the ideology variables are not useful right-hand-side variables.

There are many fascinating findings here, but I will end with one puzzle. The authors conclude that economic opinions and policy attitudes appear to be largely independent of self-interest. They find, for example, that lower-income people are more likely to think taxes are too high than higher-income people. In other areas, such as Social Security and deficit reduction, the coefficient on self-interest often has the right sign, but its importance is swamped by ideological variables. This does suggest, for one thing, that Democratic politicians like Howard Dean could never persuade the guy with a pickup truck sporting a Confederate-flag decal that repealing the death tax is a bad idea.

3. Program on International Policy Attitudes, University of Maryland, "Americans on Foreign Aid and World Hunger: A Study of U.S. Public Attitudes (February 2, 2001), www.pipa.org/OnlineReports/BFW/finding1.html.

The authors' conclusion here is not heretical; it is supported by a substantial array of research in the political science literature, which concludes, for example, that there are "no strong effects of personal financial well-being on the vote."⁴ This result is consistent with the view that a substantial fraction of voters favor abolition of the inheritance tax, even though its repeal is likely to benefit only about 1 percent of the population.

Here a paradox lurks. Economists may recall results from the "political business cycle" literature showing that election returns track the business cycle, particularly for presidential elections. My colleague Ray Fair did better than most polling firms (or the Supreme Court) in calling the 2000 election, largely on the basis of economic variables.⁵ Moreover, aggregate studies over the last three decades, going back to seminal work by Gerald Kramer,⁶ as well as studies in virtually every advanced democracy, make it clear that voters punish incumbents who are running for elections when unemployment is rising, real incomes are falling, and inflation is high. How is it that voters punish incumbents who bring on bad times but do not vote on the basis of their self-interest?

General discussion: Several participants discussed the authors' finding that self-interest was not a key factor shaping views on economic issues. Benjamin Friedman applauded the paper for its new evidence about how people form their economic opinions. But he questioned whether attitudes across income groups about tax burdens and tax cuts should be interpreted as indifference to self-interest. He noted that the actual burden of taxes differed from that implied by statutory income tax rates. Low- and middle-income people had to pay their income and payroll taxes out of their paychecks, whereas the well-to-do had many avenues for avoiding high tax rates. Furthermore, assuming declining marginal utility of income, a typical tax cut package might be expected to produce more utility for lower-income people. Shang-Jin Wei argued that if self-interest helped to predict ideology, the authors could be misattributing the effect of self-interest to ideology. Olivier Blanchard noted that both ideology and self-interest have been found by others to be related to voting

4. Feldman (1984); also see Fiorina (1978) and Rosenstone, Hansen, and Kinder (1986).

5. Fair (2002)

6. Kramer (1971).

behavior, and that all observers grant the importance of self-interest in voting on issues such as property taxes. Martin Baily suggested that people may not be truthful in responding to questionnaires, and he cited wide differences between how people say they voted in union elections and the actual vote totals.

A number of panelists discussed how other questions that the survey did not ask might have yielded illuminating results. Robert Gordon argued for questions that related an economic fact to a political interpretation; for example, did respondents attribute the current economic rebound to George W. Bush's tax cuts or to Alan Greenspan's low interest rates? William Dickens compared the present paper with a recent paper by Bryan Caplan in the *Economic Journal*. Caplan found broad agreement among economists on what the "right" answers were, and that more-knowledgeable people got more answers right (that is, they agreed with the consensus of economists). Dickens conjectured that economists would agree less about the questions in the authors' survey, which might explain the low importance of knowledge in predicting views on economic policy. William Gale, following up on William Nordhaus's comment, noted that survey questions that omit reference to actual budget constraints often produce very different answers than do questions framed around realistic alternatives. He reported that proposals to balance the budget or cut taxes typically receive strong support when asked without the constraint and strong opposition when asked with it.

Austan Goolsbee discussed whether the paper's results really undermined the *homo economicus* model. He noted that, because policies in a democracy are set by elected officials, self-interest may be better reflected in who people vote for than in their own answers to economic questions. Evidence that people's answers to survey questions were inconsistent with that model need not imply that economic policy will be inefficient. As for whether *homo economicus* was the relevant model for economists to use, he reasoned that what mattered was such things as whether agents knew their own tax rates, not whether they knew any facts about macroeconomic aggregates.

The great heterogeneity of beliefs among the respondents received considerable attention. Edward Glaeser noted that, since any one person's vote is irrelevant, the *homo economicus* model would predict that individuals will be ill informed about the issues and that beliefs will be widely dispersed. He saw this as a challenge to prevailing Bayesian models and a

challenge to understanding how the market for ideas works and how beliefs are formed. In this connection, he reasoned that understanding the incentives of those who provide information as well as the framework in which people form their views was critical; for example, in school Europeans are taught in a Marxian framework whereas Americans are taught Horatio Alger. Friedman suggested analyzing the authors' data for content bias associated with different information sources. For example, how did the views of those who relied on economists for economic information differ from the views of those who relied on ministers? Andrei Shleifer pointed out that people generally seek out providers of information that confirm their own beliefs: conservatives read and listen to conservative media sources and liberals to liberal media sources. One consequence is that conservatives are most likely to be confused or wrong about those issues where the conservative media want them to be confused or wrong, and liberals are most likely to be confused or wrong about issues where the liberal media want them to be confused or wrong.

Peter Orszag was both surprised and heartened by the survey responses regarding the long-term Social Security deficit and how to reduce it. Recent political proposals have relied mainly or entirely on benefit reductions to eliminate the prospective deficits, but only 5 percent of survey respondents chose that approach. The largest group of respondents (34 percent) wanted a combination of tax hikes and benefit cuts, which corresponds to the approach detailed in the recent book written by Orszag and Peter Diamond.

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