



What Makes People Think like Economists? Evidence on Economic Cognition from the "Survey of Americans and Economists on the Economy"

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WHAT MAKES PEOPLE THINK LIKE ECONOMISTS? EVIDENCE ON ECONOMIC COGNITION FROM THE “SURVEY OF AMERICANS AND ECONOMISTS ON THE ECONOMY”*

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ABSTRACT

The positive economic beliefs of economists and the general public systematically differ. What factors make noneconomists think more like economists? Using the “Survey of Americans and Economists on the Economy,” this paper shows people think more like economists (1) if they are well educated, (2) if they are male, (3) if their real income rose over the last 5 years, (4) if they expect their real income to rise over the next 5 years, or (5) if they have a high degree of job security. However, neither high income nor ideological conservatism have this effect. My findings for education, gender, and income have close parallels in political science: on tests of objective political knowledge, the better educated and males score higher, controlling for numerous other variables, and the independent effect of income is minor.

I. INTRODUCTION

THE positive beliefs of economists systematically differ from those of the general public,¹ but the public is itself heterogeneous. What factors tend to make noneconomists “think like economists,” that is, to moderate or eliminate their rejection of economists’ consensus positions? Using data from the “Sur-

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¹ See Robert J. Blendon *et al.*, *Bridging the Gap between the Public’s and Economists’ Views of the Economy*, 11 *J. Econ. Persp.* 105 (1997); and Bryan Caplan, *Systematically Biased Beliefs about Economics: Robust Evidence of Judgmental Anomalies from the “Survey of Americans and Economists on the Economy”* (Working paper, George Mason Univ. 2000).

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vey of Americans and Economists on the Economy” (SAEE),² this paper arrives at an extremely consistent but somewhat surprising list of what makes people think like economists: education, maleness, recent and expected income growth, and job security. Income plays little role; if anything, the wealthy think less like economists, not more. Ideology and partisan loyalties exert a strong influence on economic beliefs, but they are almost equally likely to amplify or mitigate respondents’ rejection of economists’ consensus positions.

Except for the effect of education, all of these findings are novel, to the best of my knowledge. Moreover, even though the results for education are anticipated by Robert Blendon and coauthors,³ mine are considerably stronger. The current paper goes beyond their analysis by showing that the strong effect of education persists after controlling for a number of potentially serious confounding variables, most notably, income.

There are several margins on which these patterns have broader implications for law and economics and public choice. First, they may help explain why democracies adopt the policies they do. Numerous studies⁴ find that government policy depends on public opinion. How closely actual policies resemble those that most economists would recommend, then, presumably depends in part on the magnitude of the belief gap between economists and the public. Moreover, since the public is not homogeneous in its economic beliefs, this is yet another way that changing the composition of the electorate may change policy.⁵ Second, efforts to equate the economic analysis of law with conservative ideology appear empirically misguided. The controversial views of some economists might stem from their conservative ideological stance.⁶ But politically moderate and liberal economists frequently share these controversial views. Noneconomists from either extreme of the political spectrum rarely will, even though each will occasionally find expert opinion to their liking.

This paper is divided into six sections. Section II discusses the SAEE data set. Section III describes the basic econometric procedures, implements them,

² See Washington Post/Kaiser Family Foundation/Harvard University, Survey of Americans and Economists on the Economy (SAEE), Wash. Post, October 16, 1996. The on-line version appears at <http://www2.kff.org/content/archive/1199/econgen.html>.

³ See Blendon, *et al.*, *supra* note 1.

⁴ See Kim Quaile Hill & Angela Hinton-Anderson, Pathways of Representation: A Causal Analysis of Public Opinion–Policy Linkages, 39 Am. J. Pol. Sci. 924 (1995); Robert Erikson, Gerald Wright, & John McIver, Political Parties, Public Opinion, and State Policy in the United States, 83 Am. Pol. Sci. Rev. 729 (1989); and Benjamin Page & Robert Shapiro, Effects of Public Opinion on Policy, 77 Am. Pol. Sci. Rev. 175 (1983).

⁵ See Lawrence W. Kenny & John R. Lott, Jr., Did Women’s Suffrage Change the Size and Scope of Government? 107 J. Pol. Econ. 1163 (1999); and Thomas Stratmann & Dennis Mueller, The Economic Effects of Democratic Participation (Working paper, George Mason Univ. 2000).

⁶ See Mark Kelman, On Democracy-Bashing: A Skeptical Look at the Theoretical and “Empirical” Practice of the Public Choice Movement, 74 U. Va. L. Rev. 199 (1988).

and analyzes the results. Section IV proposes and conducts a more formal test of these generalizations. Section V discusses the variation of beliefs in the economist subsample. Section VI concludes.

II. THE DATA

Estimation throughout this paper uses the "Survey of Americans and Economists on the Economy" data set.⁷ The structure of this data set is unique: while there are a number of other surveys on the economic beliefs of the public⁸ and economists,⁹ to my knowledge this is the only one to deliberately ask both groups the same questions.¹⁰

The respondents were 1,510 members of the public and 250 economists with Ph.D.s; both groups were interviewed by telephone. The respondents from the general public were selected nationwide using standard random-dialing techniques. Economists were randomly selected members of the American Economic Association who held a Ph.D. in economics, were employed full-time as an economist, and specialized in domestic economic policy.¹¹ Blendon and coauthors¹² summarize the study's basic findings.

Table 1 lists the SAEE's quite rich set of independent variables and compares the means and standard deviations of the general public and economists.¹³ It includes several narrowly economic variables: income, job security, recent income growth, and expected income growth. Each of these measures

⁷ SAEE, *supra* note 2.

⁸ See Donald Kinder & Walter Mebane, *Politics and Economics in Everyday Life*, in *The Political Process and Economic Change* (Kristen R. Monroe & Bruno S. Frey eds. 1983); Herbert McClosky & John Zaller, *The American Ethos: Public Attitudes towards Capitalism and Democracy* (1984); William Walstad, *Economic Knowledge and the Formation of Economic Opinions and Attitudes*, in *Economic Socialization: The Economic Beliefs and Behaviors of Young People* (Peter Lunt & Adrian Furnham ed. 1996); William Walstad, *The Effect of Economic Knowledge on Public Opinion of Economic Issues*, 28 *J. Econ. Educ.* 195 (1997); William Walstad & M. Larsen, *A National Survey of American Economic Literacy* (1992); Robert J. Shiller, Maxim Boycko, & Vladimir Korobov, *Popular Attitudes toward Free Markets: The Soviet Union and the United States Compared*, 81 *Am. Econ. Rev.* 385 (1991); David D. Sears & Carolyn L. Funk, *Self-Interest in Americans' Political Opinions*, in *Beyond Self-Interest* (Jane J. Mansbridge ed. 1990); and Jack Citrin & Donald Green, *The Self-Interest Motive in American Public Opinion*, in *3 Research in Micropolitics 1* (Samuel Long ed. 1990).

⁹ See Victor Fuchs, Alan B. Krueger, & James M. Poterba, *Economists' Views about Parameters, Values, and Policies: Survey Results in Labor and Public Economics*, 36 *J. Econ. Literature* 1387 (1998); David Wessel, *Economists, in Survey, Push Education and R&D Spending*, *Wall St. J.*, March 6, 1997, at A2; and Richard M. Alston, J. R. Kearl, & Michael Vaughan, *Is There a Consensus among Economists in the 1990's?* 82 *Am. Econ. Rev.* 203 (1992).

¹⁰ See Victor Fuchs, *Economics, Values, and Health Care Reform*, 86 *Am. Econ. Rev.* 1 (1996). Fuchs asks the same set of questions to health economists, economic theorists, and practicing physicians, but not the general public.

¹¹ SAEE, *supra* note 2, at 18.

¹² See Blendon *et al.*, *supra* note 1.

¹³ For clarity, I have modified many of SAEE codebook's coding conventions; see Tables Table 1 and Table 2 for details.

TABLE 1
CONTROL VARIABLES, MEANS, AND STANDARD DEVIATIONS

VARIABLE	VALUE	PUBLIC		ECONOMISTS	
		Mean	SD	Mean	SD
What is your race? Are you white, black or African American, Asian American or some other race?					
Black	= 1 if black, 0 otherwise	.08	.28	.005	.07
Asian	= 1 if Asian, 0 otherwise	.05	.22	.04	.20
Othrace	= 1 if other race, 0 otherwise	.06	.23	.02	.14
Age	= 1996 – birth year	43.73	15.88	48.60	9.11
Male	= 1 if male, 0 otherwise	.47	.50	.95	.21
How concerned are you that you or someone else in your household will lose their job in the next year?					
Jobsecurity	0 = Very concerned 1 = Somewhat concerned 2 = Not too concerned 3 = Not at all concerned	1.87	1.11	2.33	.86
During the past five years, do you think that your family's income has been going up faster than the cost of living, staying about even with the cost of living, or falling behind the cost of living?					
Yourlast5	0 = Falling behind 1 = Staying about even 2 = Going up	.76	.72	1.63	.60
Over the next five years, do you expect your family's income to grow faster or slower than the cost of living, or do you think it will grow at about the same pace?					
Yournext5	1 = About the same 2 = Faster	.95	.68	1.36	.64
If you added together the yearly incomes, before taxes, of all the members of your household for the last year, 1995, would the total be					
Income	1 = \$10,000 or less 2 = \$10,000–\$19,999 3 = \$20,000–\$24,999 4 = \$25,000–\$29,999 5 = \$30,000–\$39,999 6 = \$40,000–\$49,999 7 = \$50,000–\$74,999 8 = \$75,000–\$99,999 9 = \$100,000 or more	5.14	2.25	8.45	.74
In politics today, do you consider yourself a Republican, a Democrat, or an Independent?					
Dem	Dem = 1 if Democrat, 0 otherwise	.34	.47	.38	.49
Rep	Rep = 1 if Republican, 0 otherwise	.30	.46	.20	.40
Othparty	Othparty = 1 if member of another party, 0 otherwise	.04	.18	.02	.15

TABLE 1 (Continued)

VARIABLE	VALUE	PUBLIC		ECONOMISTS	
		Mean	SD	Mean	SD
Would you say that your views in most political matters are very liberal, liberal, moderate, conservative, or very conservative?					
Othideol	1 = Don't think in those terms, 0 otherwise	.02	.14	.02	.15
Ideology × (1 - Othideol)	-2 = Very liberal -1 = Liberal 0 = Moderate 1 = Conservative 2 = Very conservative	.13	.89	-.04	.78
What is the last grade or class that you COMPLETED in school?					
Education	1 = None, or grade 1-8 2 = High school incomplete (grades 9-11) 3 = High school graduate (grade 12 or GED certificate) 4 = Business, technical, or voca- tional school after high school 5 = Some college, no 4-year degree 6 = College graduate (B.S., B.A., or other 4-year degree) 7 = Postgraduate training or professional schooling after college (for example, toward a master's degree or Ph.D.; law or medical school)	4.57	1.62	7.00	.00
Econ	= 1 if economist, 0 otherwise	.00	.00	1.00	.00

is discrete: the income measure goes from 1 to 9, the job security measure from 0 to 3, and the growth measures from 0 to 2. The SAEI has the standard demographic variables: gender, age, and race. There are dummy variables for Asian, black, and "other race" (predominantly Hispanics), with white as the reference category. Other independent variables include measures of education (from 1 to 7), partisan affiliation dummies (Democrat, Republican, and "other party," with independent as the reference category), and self-described ideology, from -2 ("very liberal") to +2 ("very conservative").¹⁴ Finally, there is a dummy variable, Econ, to distinguish economists from noneconomists.

¹⁴ Respondents were also allowed to deny that they think in liberal-conservative terms. If so, the dummy variable Othideol takes on a value of 1. Estimating the effect of ideology therefore requires two variables: Ideology × (1 - Othideol), which picks up the effect of ideology for those who think in liberal-conservative terms, and Othideol, which picks up the beliefs of those who do not.

Comparing the means for the general public in Table 1 to those from the *Statistical Abstract of the United States*¹⁵ shows that the SAEE provides a quite representative sample of the adult American public. The age, family income, partisan affiliation, and education level distributions of the sample closely match those of the whole population for the most recent available year. On my scale, the SAEE sample is .07 standard deviations younger, .15 standard deviations poorer, .01 standard deviations more Democratic,¹⁶ and .34 standard deviations more educated than the national average.¹⁷ The fraction of male respondents (46.8 percent) is just slightly below the national average (48.0 percent). The SAEE's most noticeable difference from the adult population is its lower percentage of blacks (8.2 percent versus 11.8 percent) and Hispanics (5.7 percent versus 9.7 percent) and its higher percentage of Asians (5.1 percent versus 3.5 percent).

Table 2 lists the current paper's dependent variables and compares the mean responses and standard deviations for economists and the general public. Thirty-four of the questions about economic beliefs in the SAEE permit three answers (coded as 0, 1, or 2) that can be straightforwardly placed along a single dimension. One question permits five responses (coded as 0, 1, 2, 3, or 4) that can be similarly ranked. The two remaining questions have two possible responses (coded as 0 or 1). The questions in Table 2 span diverse subjects, covering everything from the economic harm attributable to high taxes and the deficit, to the effects of increased female labor force participation, to predictions about the living standard of the next generation.¹⁸ These questions can be classified into three main groups. The first block, numbered 1–18, asks respondents to state whether different factors—such as high taxes or the deficit—are “major reasons,” “minor reasons,” or “not a reason at all” why “the economy is not doing better than it is.” The next group, questions 19–25, asks whether a potentially relevant force is “good for the economy,”

¹⁵ See U.S. Bureau of the Census, *The Statistical Abstract of the United States* (1999).

¹⁶ See *id.* at 299. This abstract breaks respondents up into seven categories: strong Democrat, weak Democrat, independent Democrat, independent, independent Republican, weak Republican, and strong Republican. For the most recently available year, 1994, the summed percentages (strong Democrat + weak Democrat) and (strong Republican + weak Republican) almost exactly match the SAEE's corresponding percentages for Democrats and Republicans. The only noteworthy difference, the SAEE's 3.5 percent “other party” response rate, is probably a coding artifact. Unlike the SAEE, the *Statistical Abstract of the United States* has an “apolitical” category and lacks an “other party” category.

¹⁷ Most multivariate estimates of the determinants of voting (for example, Jan E. Leighley & Jonathan Nagler, *Individual and Systematic Influences on Turnout: Who Votes?* 1984, 54 *J. Pol.* 718 (1992)) find that it primarily depends on, and is increasing in, education, age, and—to a lesser extent—income. For the 1992 presidential election, the last where the *Statistical Abstract of the United States* (U.S. Bureau of the Census, *supra* note 15, at 300) has complete data, actual voters' were .22 standard deviations more educated and .18 standard deviations older than potential voters. Thus, the demographic match between the SAEE and the voting public is slightly better for education but a bit worse for age.

¹⁸ The variable identifiers are TAXHIGH, DEFICIT, WOMENWORK, and CHILDGEN.

TABLE 2
QUESTIONS, MEANS, AND STANDARD DEVIATIONS

NUMBER	VARIABLE	DEFINITION	PUBLIC		ECONOMISTS	
			Mean	SD	Mean	SD
Regardless of how well you think the economy is doing, there are always some problems that keep it from being as good as it might be. I am going to read you a list of reasons some people have given for why the economy is not doing better than it is. For each one, please tell me if you think it is a major reason the economy is not doing better than it is, a minor reason, or not a reason at all. (0 = Not a reason at all"; 1 = "Minor reason"; 2 = "Major reason")						
1	TAXHIGH	Taxes are too high	1.50	.64	.78	.73
2	DEFICIT	The federal deficit is too big	1.73	.54	1.13	.68
3	FORAID	Foreign aid spending is too high	1.52	.69	.15	.39
4	IMMIG	There are too many immigrants	1.22	.78	.20	.43
5	TAXBREAK	Too many tax breaks for business	1.29	.73	.66	.58
6	INADEDUC	Education and job training are inadequate	1.57	.65	1.63	.58
7	WELFARE	Too many people are on welfare	1.60	.63	.72	.62
8	AA	Women and minorities get too many advantages under affirmative action	.75	.71	.22	.46
9	HARDWORK	People place too little value on hard work	1.43	.74	.81	.72
10	REG	The government regulates business too much	1.22	.72	1.00	.71
11	SAVINGS	People are not saving enough	1.39	.70	1.50	.62
Now I am going to read you another list of reasons, having to do with businesses, that some people have given for why the economy is not doing better than it is. For each one, please tell me if you think it is a major reason the economy is not doing better than it is, a minor reason, or not a reason at all. (0 = "Not a reason at all"; 1 = "Minor reason"; 2 = "Major reason")						
12	PROFHIGH	Business profits are too high	1.27	.74	.17	.46
13	EXECPAY	Top executives are paid too much	1.60	.64	.67	.68
14	BUSPROD	Business productivity is growing too slowly	1.19	.68	1.44	.69
15	TECH	Technology is displacing workers	1.26	.72	.29	.50
16	OVERSEAS	Companies are sending jobs overseas	1.59	.61	.47	.62
17	DOWNSIZE	Companies are downsizing	1.51	.65	.47	.59
18	COMPEDUC	Companies are not investing enough money in education and job training	1.55	.63	1.16	.75
Generally speaking, do you think each of the following is good or bad for the nation's economy, or don't you think it makes much difference? (0 = "Bad"; 1 = "Doesn't make much difference"; 2 = "Good")						
19	TAXCUT	Tax cuts	1.47	.74	1.08	.87
20	WOMENWORK	More women entering the workforce	1.48	.64	1.73	.50
21	TECHGOOD	Increased use of technology in the workplace	1.57	.76	1.98	.14
22	TRADEAG	Trade agreements between the United States and other countries	1.34	.87	1.87	.43
23	DOWNGOOD	The recent downsizing of large corporations	.60	.84	1.40	.76

TABLE 2 (Continued)

NUMBER	VARIABLE	DEFINITION	PUBLIC		ECONOMISTS		
			Mean	SD	Mean	SD	
Some people say that these are economically unsettled times because of new technology, competition from foreign countries, and downsizing. Looking ahead 20 years, do you think these changes will eventually be good or bad for the country, or don't you think these changes will make much difference?							
24	CHANGE20	0 = Bad 1 = Won't make much difference 2 = Good	1.15	.87	1.91	.37	
Do you think that trade agreements between the United States and other countries have helped create more jobs in the U.S., or have they cost the U.S. jobs, or haven't they made much of a difference?							
25	TRADEJOB	0 = Cost the U.S. jobs 1 = Haven't made much difference 2 = Helped create jobs in the U.S.	.64	.77	1.47	.60	
Which do you think is more responsible for the recent increase in gasoline prices?							
26	WHYGASSD	0 = Oil companies trying to increase their profits 1 = The normal law of supply and demand "Both" coded as 1; "neither" as 0	.27	.44	.89	.32	
Do you think improving the economy is something an effective president can do a lot about, do a little about, or is that mostly beyond any president's control?							
27	PRES	0 = Beyond any president's control 1 = Do a little about 2 = Something president can do a lot about	.91	.82	.93	.60	
Do you think gas prices are too high, too low, or about right?							
28	GASPRICE	0 = Too low 1 = About right 2 = Too high	1.68	.55	.64	.62	
Do you think most of the new jobs being created in the country today pay well, or are they mostly low-paying jobs?							
29	NEWJOB	0 = Low-paying jobs 1 = Neither 2 = Pay well	.37	.75	1.10	.88	
30	GAP20	0 = Smaller 1 = About the same 2 = Larger	1.70	.56	1.85	.41	

TABLE 2 (Continued)

NUMBER	VARIABLE	DEFINITION	PUBLIC		ECONOMISTS	
			Mean	SD	Mean	SD
During the past 20 years, do you think that, in general, family incomes for average Americans have been going up faster than the cost of living, staying about even with the cost of living, or falling behind the cost of living?						
31	INCOME20	0 = Falling behind 1 = Staying about even 2 = Going up	.38	.65	1.16	.75
Thinking just about wages of the average American worker, do you think that during the past 20 years they have been going up faster than the cost of living, staying about even with the cost of living, or falling behind the cost of living?						
32	WAGE20	0 = Falling behind 1 = Staying about even 2 = Going up	.33	.58	.75	.75
Some people say that in order to make a comfortable living, the average family must have two full-time wage earners. Do you agree with this, or do you think the average family can make a comfortable living with only one full-time wage earner?						
33	NEED2EARN	0 = Can make living with one wage earner 1 = Agree that need two wage earners	.87	.33	.73	.44
Over the next five years, do you think the average American's standard of living will rise, or fall, or stay about the same?						
34	STAN5	0 = Fall 1 = Stay about the same 2 = Rise	.93	.72	1.44	.64
Do you expect your children's generation to enjoy a higher or lower standard of living than your generation, or do you think it will be about the same?						
35	CHILDGEN	0 = Lower 1 = About the same 2 = Higher	1.05	.80	1.32	.77
[If you have any children under the age of 30] When they reach your age, do you expect them to enjoy a higher or lower standard of living than you do now, or do you expect it to be about the same?						
36	CHILDSTAN	0 = Lower 1 = About the same 2 = Higher	1.30	.73	1.31	.74
When you think about America's economy today, do you think it is . . .						
37	CURECON	0 = In a depression 1 = In a recession 2 = Stagnating 3 = Growing slowly 4 = Growing rapidly	2.60	1.06	3.09	.41

“bad for the economy,” or “doesn’t make much difference.” The miscellaneous third category is composed of the 12 remaining questions that vary widely in format.

III. WHAT MAKES PEOPLE THINK LIKE ECONOMISTS: BASIC RESULTS

A. Overview

Thirty-seven ordered logits, one for each of the dependent variables listed in Table 2, were estimated using the pooled data for the general public and economists from the SAEE. All equations used a common set of independent variables: race dummies, age, age squared, gender, job security, recent income growth, expected income growth, income, party, ideology, and education. Tables 3–5 report the crucial qualitative results from the perspective of this paper. In their “Econ Sign” columns, these tables show the sign of the Econ dummy’s coefficient—assuming it is statistically significant at the 5 percent level—for each of the 37 equations. The tables then alternate between listing the signs other independent variables take (again, assuming they are significant at the 5 percent level) and, if the signs are listed, indicating whether they have the same sign (✓) as Econ or the opposite sign (X). The latter cells are left blank unless both variables in question have an effect significantly different from zero.

Examine, for example, the “Econ Sign” column of Table 3’s TAXHIGH row. It shows that the impact of Econ on TAXHIGH is negative and significant; controlling for all other factors, economists are less likely to believe that high taxes are a major economic problem. The next column, “Education Sign,” shows that the impact of Education on TAXHIGH is negative and significant; controlling for everything else, the more educated are less likely to believe that high taxes are a major economic problem. The column to its immediate right, labeled “Education & Econ,” uses a check mark to show that both variables are significant and have the same sign. In contrast, Table 4 shows that the impact of Ideology on TAXHIGH is positive; the more conservative respondents are, the more harm they see in high taxation.¹⁹ The “Ideology & Econ” column of the TAXHIGH row thus has an X instead of a check mark, indicating that while both Econ and Ideology exert a statistically significant influence, they have opposite signs.

Note that even when Econ and, for example, Education have the same sign on a given question, more education does not necessarily make individuals’ responses on that question more closely resemble economists’. That depends on what values the other variables happen to take; there is a pos-

¹⁹ Note that if conservatism works in the one direction, then liberalism by definition works in the opposite direction: if Ideology \times (1 – Othideol) has the same sign as Econ, conservatives and economists think more alike; if they have different signs, liberals and economists think more alike.

sibility of “overshooting.” Suppose, for example, that in a given equation, four different variables have the same sign as Econ; assume further that a noneconomist with moderately high values of these four variables exactly agrees with economists’ typical judgment. If so, it follows that moving from moderately high to very high values of these variables will widen rather than narrow an individual’s disagreements with economists.

Throughout this paper, then, comparisons always assume that all variables other than the one under consideration are fixed at their mean sample values for the general public (Table 1). This, of course, still does not rule out the possibility of overshooting. But so long as only one variable changes while the others remain fixed at their mean value, such overshooting hardly ever occurs. The text notes the exceptional cases where it does.

B. What Makes People Think Like Economists

Five independent variables have a strong and consistent tendency to make people think like economists: Education, Male, Yourlast5, Yournext5, and Jobsecurity (Table 3). Out of the 37 dependent variables, the coefficient on Econ is statistically significant 31 times. Within this subset of 31 equations, Education exerts a statistically significant influence 21 times, compared to 17 for Male, 14 for Yourlast5, 12 for Yournext5, and 16 for Jobsecurity. In almost every case, the following patterns hold: Education makes people think more like economists (two exceptions). Males think more like economists (same two exceptions). Recent and expected income growth make people think more like economists (no exceptions). Greater job security makes people think more like economists (no exceptions). Changing any of these variables while holding all others fixed at their sample means never results in overshooting.

Consider for instance the probability that a respondent believes that “taxes are too high” is a “major reason” why the economy is not doing better than it otherwise would.²⁰ As Table 3 shows, the signs on Econ, Education, Male, Yourlast5, and Jobsecurity are all negative and significant. Holding all variables other than Econ at the sample means, a predicted 61.9 percent of the general public—but only 40.3 percent of economists—affirms that high taxes are a major problem. Raising a noneconomist’s education level from its mean to its maximum (7, postgraduate) reduces the fraction of “major” responses to 44.3 percent. Changing the hypothetical respondent’s gender to female raises it to 65.4 percent. Raising subjects’ recent income growth to its highest possible value brings it down to 53.5 percent; doing the same for job security lowers it to 58.0 percent.

To take another example, economists and the general public sharply disagree about the applicability of supply-and-demand analysis to the 1996

²⁰ The variable identifier is TAXHIGH.

TABLE 3
WHAT MAKES PEOPLE THINK LIKE ECONOMISTS

Equation	Variable	Econ Sign	Education Sign	Education & Econ	Male Sign	Male & Econ	Yourlast5 Sign	Yourlast5 & Econ	Yournext5 Sign	Yournext5 & Econ	Jobsecur5 Sign	Jobsecur5 & Econ
1	TAXHIGH	-	✓	✓	-	✓	-	✓	-	-	-	✓
2	DEFICIT	-	✓	✓	-	✓	-	-	-	-	-	✓
3	FORAID	-	✓	✓	-	✓	-	-	-	-	-	✓
4	IMMIG	-	✓	✓	-	✓	-	-	-	-	-	✓
5	TAXBREAK	-	✓	✓	-	✓	-	✓	-	✓	-	✓
6	INAEDEDUC	-	✓	✓	-	✓	-	✓	-	-	-	✓
7	WELFARE	-	✓	✓	-	✓	-	✓	-	-	-	✓
8	AA	-	✓	✓	-	✓	-	-	-	-	-	✓
9	HARDWORK	-	✓	✓	-	✓	-	-	-	-	-	✓
10	REG	-	-	-	+	-	-	-	-	-	-	✓
11	SAVINGS	-	-	-	-	-	-	-	-	-	-	✓
12	PROFHIGH	-	✓	✓	-	✓	-	✓	-	✓	-	✓
13	EXECPAY	-	✓	✓	-	✓	-	✓	-	-	-	✓
14	BUSPROD	+	-	-	-	-	-	-	-	-	-	✓
15	TECH	-	✓	✓	-	✓	-	✓	-	-	-	✓
16	OVERSEAS	-	✓	✓	-	✓	-	✓	-	-	-	✓
17	DOWNSIZE	-	✓	✓	-	✓	-	✓	-	-	-	✓

TABLE 4
WHAT DOES NOT MAKE PEOPLE THINK LIKE ECONOMISTS

Equation	Variable	Econ Sign	Income Sign	Income & Econ	Ideology Sign	Ideology & Econ	Dem Sign	Dem & Econ	Rep Sign	Rep & Econ
1	TAXHIGH	-			+	X	-	✓	+	X
2	DEFICIT	-					-	✓		
3	FORAID	-					-	✓		
4	IMMIG	-			+	X	+	X		
5	TAXBREAK	-			-	✓				
6	INAEDUC	-			+	X	-	✓	+	X
7	WELFARE	-			+	X	-			
8	AA	-			+	X	-	✓		
9	HARDWORK	-			+	X	-		+	
10	REG									
11	SAVINGS									
12	PROFHIGH	-			-	✓			-	✓
13	EXECPAY	-			-	✓				
14	BUSPROD	+								
15	TECH	-								
16	OVERSEAS	-								
17	DOWNSIZE	-			-	✓				✓
18	COMPEDUC	-			-	✓				✓
19	TAXCUT	-			+	X	-	✓	-	X
20	WOMENWORK	+	+	✓	-				+	-

TABLE 5
OTHER VARIABLES

Equation	Variable	Econ Sign	Black Sign	Black & Econ	Asian Sign	Asian & Econ	Othrace Sign	Othrace & Econ	Age Sign	Age & Econ	Age ² Sign	Age ² & Econ
1	TAXHIGH	-			+	X			+	X	-	✓
2	DEFICIT	-									-	✓
3	FORAID	-										
4	IMMIG	-					+					
5	TAXBREAK	-						X				
6	INAEDEDUC	-			+							
7	WELFARE	-	-	✓								
8	AA	-	-	✓								
9	HARDWORK	-										
10	REG											
11	SAVINGS								-		+	
12	PROFHIGH	-										
13	EXECPAY	-	-	✓								
14	BUSPROD	+	+	✓								
15	TECH	-							-		+	X
16	OVERSEAS	-								✓		
17	DOWNSIZE	-										

18	COMPEDUC	-	+	X	+	X							
19	TAXCUT	-	+	✓									
20	WOMENWORK	+											
21	TECHGOOD	+	+										
22	TRADEAG	+											✓
23	DOWNGOOD	+											
24	CHANGE20	+											✓
25	TRADEJOB	+											✓
26	WHYGASSD	+											✓
27	PRES												
28	GASPRICE	-											✓
29	NEWJOB	+											
30	GAP20												
31	INCOME20	+											
32	WAGE20	+											✓
33	NEED2EARN	-											✓
34	STAN5	+	+	X									✓
35	CHILDDEN	+			+								✓
36	CHILDSTAN	+			+								✓
37	CURECON	+			+								✓
Total			7 ✓ 2 X		1 ✓ 2 X		3 ✓ 1 X		1 ✓ 9 X		10 ✓ 1 X		

NOTE. - + = positive and significant at the 5% level; - = negative and significant at the 5% level; ✓ = thinks more like an economist as variable increases; X = thinks less like an economist as variable increases

increase in the price of gas.²¹ With everything but Econ fixed at its mean value, 80.8 percent of economists endorse the supply-and-demand approach, compared to only 22.6 percent of the public. The coefficients on Education and Jobsecurity are also positive and significant, however. Thus, for otherwise identical members of the general public with postgraduate education, use of the supply-and-demand framework rises to 30.6 percent. Conversely, reducing job security from the mean to the lowest level drags support of supply-and-demand analysis down to 17.9 percent.

Recall that these results consider only the subset of cases where both the variable in question and the Econ dummy are statistically significant. Occasionally, Econ plays a significant role even though none of the other “economistic” variables do. Economists are less pessimistic about the deficit and more pessimistic about slow productivity growth and tax cuts; yet education, gender, recent income growth, expected income growth, and job security have no influence on any of these three. In numerous other cases, only a subset of the five matter. For example, economists, males, people with recent income growth, and people with past income growth all have more optimistic estimates about real income growth over the past 20 years. Education and job security, however, have no effect.²²

There are also five instances where Econ is not significant but some of the other economistic variables are. Males and people with secure jobs worry less about inadequate spending on education. The educated worry less about regulation, but males worry more. Males are less likely to believe the president can favorably affect the economy. The educated are more likely to affirm that inequality increased over the last 20 years, but people who expect their income to rise and believe their jobs are secure tend to disagree. Recent income growth, expected income growth, and job security all correlate with more optimistic assessments of the current state of the economy. For all five of these questions, the coefficient on Econ is not significantly different from 0.²³

It is also noteworthy that Education and Male have the “wrong” sign for the same two questions, STAN5 and CHILDDGEN, which are the only ones that ask about the future of the economy in general terms. Economists, controlling for other factors, are more optimistic about income growth for the next 5 years and for the next generation, while males and the better educated are more pessimistic. The response pattern shifts for CHILDDSTAN, which asks respondents about the economic future of their own children. Here economists are still unusually optimistic, but neither education nor gender exerts any influence. Economists are optimistic about both the next generation and their own children but are less optimistic in the latter case.

²¹ The variable identifier is WHYGASSD.

²² The variable identifiers are DEFICIT, BUSPROD, TAXCUT, and INCOME20.

²³ The variable identifiers are INADEDUC, REG, PRES, GAP20, and CURECON.

The well educated and males, in contrast, are pessimistic about the next generation but have normal expectations about the future of their own children.

C. *What Does Not Make People Think Like Economists*

Two classes of variables conspicuously fail to make people think like economists (Table 4). Even though recent and expected income growth make people think more like economists, the level of income does not. Income plays a statistically significant role in only four equations. In three of the four cases, more income makes people think less like economists, not more. In spite of the popular view that economists rationalize the interests of the affluent,²⁴ if anything, there is a slight tendency for economists and the affluent to disagree. The mistake is understandable, however, given the high correlation between income and education ($r = .55$) and the strong tendency for economists and the better educated to agree. This is a classic omitted-variable problem.

A second popular perception²⁵ is that economists are essentially conservative ideologues. It is therefore noteworthy that economists are about as likely to agree with liberals as with conservatives, and with Democrats as with Republicans. Measuring ideology from -2 (very liberal) to $+2$ (very conservative), there are nine questions where conservatives think more like economists, versus seven questions where conservatives think less like economists.²⁶ Turning to party loyalties, there are four questions where Democrats think more like economists and three questions where they think less like economists. Similarly, there are three questions where Republicans think more like economists and three questions where they think less like economists.²⁷

Moving to individual questions, there are definitely instances where economists embrace extremely conservative beliefs. But there are about equally many cases where economists profess extremely liberal beliefs. Suppose one compares ideologically moderate, politically independent economists to two archetypes: "right-wing ideologues" (very conservative Republicans) and

²⁴ See Mario A. Brossard & Steven Pearlstein, *Great Divide: Economists vs. Public: Data and Daily Life Tell Different Stories*, Wash. Post, October 15, 1996, at A1; Clay Chandler & Richard Morin, *Prosperity's Imbalance Divides U.S.: Disparity Grows Wider for Winners, Losers*, Wash. Post, October 14, 1996, at A1; and note 1 *supra*.

²⁵ See George Soros, *The Crisis of Global Capitalism: Open Society Endangered* (1998); William Greider, *One World, Ready or Not: The Manic Logic of Global Capitalism* (1997); William Kuttner, *Everything for Sale: The Virtues and Limits of Markets* (1997); and William Lazonick, *Business Organization and the Myth of the Market* (1991).

²⁶ There are also two equations where Othideol is significant. In both cases, people who do not think in liberal-conservative terms think less like economists.

²⁷ There is also one equation where the "other party" dummy was significant; for this one case, members of "other parties" thought less like economists.

“left-wing ideologues” (very liberal Democrats). There are a number of questions where, on average, economists are more extreme than right-wing ideologues. They are even less worried about high profits, executive pay, and downsizing and are more likely to see both downsizing and current economic disturbances as good on the whole. Economists are also much more likely to accept a supply-and-demand explanation for the gas price rise and have more optimistic views of the quality of new jobs and the growth of real incomes and wages over the past 20 years.²⁸ There are other equations where economists are more extreme than left-wing ideologues: they worry even less about foreign aid, immigration, welfare, affirmative action, and the work ethic.²⁹ Economists also have left-leaning perspectives on high taxes, tax cuts, and female labor force participation and right-leaning perspectives on tax breaks, business investment in the workforce, and families’ need for two incomes.³⁰ But there is overshooting in these latter cases: the noneconomist ideologues take more extreme positions than the nonideological economists.

By choosing a biased subset of questions, it would naturally be possible to “show” that a nonideological economics profession is actually highly politicized, or vice versa.³¹ It is important to realize, then, that the authors of the SAEE did not deliberately pick questions to yield this result. They did not aim to construct a survey with even numbers of liberal and conservative questions that economists were already known to support. As the SAEE authors explain, they were interested in studying three dimensions of economic beliefs and picked questions accordingly: “assessments of current and past economic performance; expectations for the economic future; and perceptions of why the economy is not doing better.”³² In other words, the motivation behind the SAEE’s construction was largely orthogonal to traditional political ideologies. Still, the possibility of ideological question bias is worth addressing in further research, perhaps by selecting a random sample of topics from newspapers or economic journals to constrain the survey designers’ discretion.

D. Other Factors

The list of independent variables also includes race dummies, Age, and Age². The race dummies are relatively unimportant: there are nine equations where Econ and Black are both significant, compared to three for Asian and four for “other races.” It is marginally interesting, however, that controlling

²⁸ The variable identifiers are PROFHIGH, EXECPAY, DOWNSIZE, DOWNGOOD, CHANGE20, WHYGASSD, NEWJOB, INCOME20, and WAGE20.

²⁹ The variable identifiers are FORAID, IMMIG, WELFARE, AA, and HARDWORK.

³⁰ The variable identifiers are TAXHIGH, TAXCUT, WOMENWORK, TAXBREAK, COMPEDUC, and NEED2EARN.

³¹ For this point, I would like to thank an anonymous referee.

³² Blendon *et al.*, *supra* note 1, at 106.

for all other factors, blacks think slightly more like economists in seven equations and less like economists in only two cases.

There is a clearer pattern for Age and Age²: the linear effect of Age is to magnify disagreement with economists, but its quadratic effect is to diminish them. Econ and Age are both significant in 10 equations; they have opposite signs in nine of them. Econ and Age² are both significant in 11 equations; they have the same sign in 10. In sum, both the young and the old are a little more likely to think like economists than the middle-aged. The precise age of predicted maximal disagreement varies from question to question but usually occurs sometime between the late 30s and early 50s.

E. Beliefs and the Business Cycle

The SAEE was collected during July, August, and September of 1996. Is it possible that the time the survey was administered skewed the responses? As an anonymous referee points out, one serious possibility is that non-economists' attitudes are fixed (always favoring tax cuts or deficit reduction, for example), while economists' beliefs are sensitive to cyclical variables.

Fortunately, the SAEE was conducted during a quite "normal" period for the macroeconomy. The inflation rate for 1996 was 3 percent, and the unemployment rate ranged from a high of 5.7 percent to a low 5.4 percent. Thus, although part of the reason for economists' disagreements with the public may be the former's greater attention to current conditions, 1996 was a year in which one would expect disagreement to be close to its "normal" level. In other words, suppose the belief gap were decomposed into a "permanent" and a "cyclical" component. Then during 1996, the magnitude of the cyclical component must have been small. Seeing whether such a cyclical component of the belief gap exists—and, if so, how it behaves over the business cycle—must be left for future research.³³ But it would be difficult to interpret the SAEE's differences as a purely cyclical effect.

IV. WHAT MAKES PEOPLE THINK LIKE ECONOMISTS: A FORMAL TEST

A. Basic Results

Examining the results for Tables 3–5 reveals five variables that seem to consistently make people "think like economists." This section proposes and implements a more formal way to test these generalizations, respecifying the 37 equations estimated in Section III.³⁴ The procedure begins by dropping

³³ If the cross-sectional findings for economic growth and job security also hold over time, then one should expect the belief gap to be decreasing in the rate of economic growth. Bryan Caplan, *The Idea Trap: The Political Economy of Growth Divergence* (Working paper, George Mason Univ. 2000), builds a political economy model of growth divergence using this approach.

³⁴ I am indebted to Robin Hanson for suggesting the following procedure.

all of the explanatory variables except for the six “economistic” ones: Education, Male, Yourlast5, Yournext5, Jobsecurity, and Econ itself.³⁵ It then restricts the relative effect of these economistic variables to be identical in all equations, while allowing the absolute importance of these economistic variables to vary equation by equation. Finally, it estimates the coefficients for the entire system of 37 equations using nonlinear least squares. Formally, the statistical procedure of this section is to estimate the following system:

$$\begin{aligned} \text{TAXHIGH} = & c(1) + w(1)[e(1)\text{Education} + e(2)\text{Male} + e(3)\text{Yourlast5} \\ & + e(4)\text{Yournext5} + e(5)\text{Jobsecurity} + \text{Econ}] + \varepsilon, \end{aligned} \quad (1)$$

$$\begin{aligned} \text{DEFICIT} = & c(2) + w(2)[e(1)\text{Education} + e(2)\text{Male} + e(3)\text{Yourlast5} \\ & + e(4)\text{Yournext5} + e(5)\text{Jobsecurity} + \text{Econ}] + \varepsilon, \end{aligned} \quad (2)$$

$$\begin{aligned} \text{FORAID} = & c(3) + w(3)[e(1)\text{Education} + e(2)\text{Male} + e(3)\text{Yourlast5} \\ & + e(4)\text{Yournext5} + e(5)\text{Jobsecurity} + \text{Econ}] + \varepsilon, \end{aligned} \quad (3)$$

and so on, for equations (4)–(37). Note that each of the e coefficients is restricted to be identical in all equations: the coefficient in front of Education, $e(1)$, has to be the same for all 37 questions; the coefficient in front of Male, $e(2)$, has to be the same for all 37 questions; and so on. There are, however, no cross-equation restrictions imposed on the constants or the w terms. The impact of the economistic variables in a given equation can thus be positive, negative, or zero, small or large, because there is an equation-specific w coefficient in front of the bracketed terms. Yet the coefficients inside the brackets are identical in all equations; thus, the ratio of the coefficients on Education, Male, Yourlast5, Yournext5, Jobsecurity, and Econ is invariant. In other words, this system of equations forces all of the economistic variables to be colinear.

The output for this system of equations concisely confirms the main generalizations from Section III (Table 6, panel A). All five coefficients inside the brackets— $e(1)$, $e(2)$, $e(3)$, $e(4)$, and $e(5)$ —are positive and highly statistically significant, with t -statistics exceeding 10. This means two things. First, if Econ matters, then Education, Male, Yourlast5, Yournext5, and Jobsecurity typically matter as well. Second, Education, Male, Yourlast5, Yournext5, Jobsecurity, and Econ all tend to push beliefs in the same direction.

The e coefficients have a simple, intuitive interpretation. The coefficient of .093 on Education shows that each step up the educational ladder has about 9.3 percent of the effect of a Ph.D. in economics. Moving from a grade

³⁵ Performing this procedure with the full set of controls from Section III only slightly alters the results.

TABLE 6
VALUES OF e AND w COEFFICIENTS

A. e COEFFICIENTS			
Equation	Variable	Coefficient	t -Statistic
1	Education	.093	18.071
2	Male	.157	11.263
3	Yourlast5	.122	11.817
4	Yournext5	.099	10.093
5	Jobsecurity	.059	10.043
B. w COEFFICIENTS			
Equation	Variable	Coefficient	t -Statistic
1	TAXHIGH	-.514	-16.956
2	DEFICIT	-.142	-9.577
3	FORAID	-.883	-26.837
4	IMMIG	-.703	-22.337
5	TAXBREAK	-.519	-17.121
6	INAEDUC	-.007	-.242
7	WELFARE	-.577	-18.846
8	AA	-.363	-12.291
9	HARDWORK	-.370	-12.482
10	REG	-.178	-6.136
11	SAVINGS	.065	2.261
12	PROFHIGH	-.768	-23.938
13	EXECPAY	-.628	-20.291
14	BUSPROD	.114	3.950
15	TECH	-.697	-22.142
16	OVERSEAS	-.712	-22.512
17	DOWNSIZE	-.668	-21.366
18	COMPEDUC	-.255	-8.709
19	TAXCUT	-.220	-7.320
20	WOMENWORK	.181	6.209
21	TECHGOOD	.306	10.380
22	TRADEAG	.427	14.145
23	DOWNGOOD	.497	16.214
24	CHANGE20	.564	18.149
25	TRADEJOB	.584	18.875
26	WHYGASSD	.397	13.331
27	PRES	.006	.199
28	GASPRICE	-.690	-21.506
29	NEWJOB	.465	15.044
30	GAP20	.064	2.208
31	INCOME20	.491	16.242
32	WAGE20	.303	10.295
33	NEED2EARN	-.110	-3.631
34	STAN5	.338	11.438
35	CHILDGEN	.121	4.170
36	CHILDSTAN	-.002	-.044
37	CURECON	.430	13.969

school (Education = 1) to a postgraduate (Education = 7) level is thus roughly equivalent to 55.8 percent (9.3 percent \times 6) of an advanced economics degree. Males think about 15.7 percentage points more like economists than females—an effect comparable to about one-and-a-half educational steps. Each discrete one-unit increase in recent income growth, expected income growth, and job security is, respectively, 12.2, 9.9, and 5.9 percent as potent as an economics Ph.D.

The interpretation of the w coefficients is similarly intuitive: the larger the absolute value of a w coefficient, the more “economistic” a topic is (Table 6, panel B). In each equation, the w coefficient serves a double role. Multiplying through, it can be seen that it is simply the coefficient on the Econ dummy. It captures the average effect of economic training. At the same time, the w coefficients also measure the question-specific importance of the other five economistic variables. For example, $w(1)$, the coefficient in front of the brackets for the TAXHIGH equation, is equal to $-.514$. *Ceteris paribus*, the predicted belief for an economist is consequently $.514$ less than that for a noneconomist. But the value of the w coefficient has further implications: the predicted effect on TAXHIGH is $-.048$ ($-.514 \times .093$) for a unit of education, $-.081$ ($-.514 \times .157$) for male gender, and so on.

After imposing such strong colinearity restrictions, the w coefficients are nevertheless statistically significant in 34 out of the 37 equations at the 5 percent level. For most questions, the effect of economistic variables is large in both statistical and economic terms. Economistic variables exert the most influence for the questions about foreign aid, high profits, overseas competition, immigration, technological unemployment, the price of gas, downsizing, and executive compensation. The absolute t -statistics of the w coefficients for these questions exceed 20.³⁶ Economistic variables exert only moderately less influence on 16 further variables, where the w coefficients have absolute t -statistics smaller than 20 but greater than 10. There are only three questions where the estimated values of w are small enough to suggest that economistic variables play no role.

B. Sensitivity Tests

Other Economistic Variables? To see whether any important variables were being left out of the bracketed expression, the preceding system was reestimated after adding income and ideology to the package of economistic variables. Equation (1), for example, becomes

³⁶ The variable identifiers are FORAID, PROFHIGH, OVERSEAS, IMMIG, TECH, GAS-PRICE, DOWNSIZE, and EXECPAY.

$$\begin{aligned}
 \text{TAXHIGH} = & c(1) + w(1)[e(1)\text{Education} + e(2)\text{Male} \\
 & + e(3)\text{Yourlast5} + e(4)\text{Yournext5} \\
 & + e(5)\text{Jobsecurity} + e(6)\text{Income} \\
 & + e(7)\text{Ideology} \times (1 - \text{Othideol}) + \text{Econ}] + \varepsilon.
 \end{aligned}
 \tag{1'}$$

Altering the specification in this way had almost no effect on the final results. Both $e(6)$ and $e(7)$ were statistically indistinguishable from zero, and the other e coefficients barely changed. This might be expected for income, which played little role in Section III's unrestricted estimation. Ideology's influence, in contrast, was large when coefficients were unrestricted. But forcing Ideology to be colinear with the Econ dummy and the other economic variables completely masks its effect.³⁷

Exploring the Role of Education. All of the earlier specifications force educational steps to have equal effects. Adding a college graduate dummy to the system (1)–(37) to test this restriction shows that it is an oversimplification.³⁸ The coefficient on the original education measure remains positive and highly significant. But the college graduate dummy exerts a strong independent effect. One step of education matters 4.5 percent—and college graduation 20.1 percent—as much as an economics Ph.D. The remaining e and w coefficients hardly change at all. Adding a college graduate effect thus suggests a mildly larger belief gap between economists and college graduates and a markedly larger belief gap between economists and the rest of the public.

There is a related concern. Economists in the SAEЕ always have the highest level of education. Perhaps economists think like the highly educated rather than the highly educated think like economists;³⁹ in other words, their distinctive beliefs might stem from their maximal education rank rather than their economic training. To test for this possibility, the preceding system was reestimated after limiting the sample to respondents with Education = 7 (and dropping Education from the independent variables). It turns out that even within this subsample, economists remain as distinctive as ever; t -statistics naturally shrink because of the smaller sample size, but on average the magnitude of the w coefficients is about the same. The estimated effect of male gender actually rises to 20.6 percent of economic training; the other e

³⁷ Searching for other variables improperly omitted from the list of economic variables uncovers little evidence that any exist. Age and Age² are the only ones with a case, and it is quite marginal: if appended to the set of independent variables inside the brackets, their coefficients' respective t -statistics are -1.91 and $+2.01$.

³⁸ I would like to thank Sam Peltzman for suggesting this test.

³⁹ I am indebted to Sam Peltzman for raising this point.

coefficients stay roughly the same, although expected income growth now matters more than past income growth.⁴⁰

V. VARIATIONS IN ECONOMISTS' BELIEFS

A. *Why Do Economists Disagree?*

There are systematic belief differences between economists and the public, but economists disagree with each other as well. Why? Do the same variables that matter for the general public matter for economists too? Conversely, do variables—especially income—that matter little for the public play a larger role within the economic subculture? Using only the data for economists, this section reruns the ordered logits from Section III to see if any patterns emerge. After dropping Education and Econ from the right-hand side, the remaining independent variables are race, age, age squared, gender, job security, recent and expected income growth, income, party identification, and ideology. Table 7 summarizes the results for both variables that make the general public think like economists (gender, income growth, and job security) and variables that do not make the general public think like economists (income, ideology, and party identification), recording the signs of those variables significant at the 5 percent level. Looking for example at Table 7's TAXHIGH row, it can be seen that liberal Democratic economists are significantly less worried than conservative Republican economists about high taxes. Gender, income growth, job security, and income, in contrast, make no apparent difference for economists' beliefs on this question.

Overall, the SAE evidence suggests that disagreements among economists are surprisingly random. There are 10 questions for which nothing in Table 7 matters. Income remains a poor predictor of economists' beliefs. At most, those with higher income are slightly more prone to think that supply and demand explain the gas price rise, that trade agreements cost jobs, and that real wages and incomes rose over the last 20 years.⁴¹ Most of the strongest patterns in the public's beliefs fade in the economist-only subsample: gender, recent income growth, and job security rarely matter for economists.⁴² Expected income growth is the only "economistic" variable that matters for

⁴⁰ Reestimating the system (1')–(37') for respondents with Education = 7 shows that within this subsample, both income and conservatism make people think more like economists. Each discrete income step makes respondents think 3.5 percent more like economists; each discrete ideological step makes respondents think 6.4 percent more like economists. (The other economic coefficients stay about the same: expected income growth matters more, while job security and recent income growth matter less.) Perhaps this explains the stereotype that links economic thinking with affluence and conservatism: while false for the overall population, it is somewhat true at the highest education levels.

⁴¹ The variable identifiers are WHYGASSD, TRADEJOB, WAGE20, and INCOME20.

⁴² Note, however, that the small percentage of female economists (5 percent) would make gender gaps difficult to statistically detect if they were present.

TABLE 7
WHY ECONOMISTS DISAGREE

EQUATION	VARIABLE	VARIABLES THAT MAKE THE GENERAL PUBLIC THINK LIKE ECONOMISTS				VARIABLES THAT DO NOT MAKE THE GENERAL PUBLIC THINK LIKE ECONOMISTS			
		Male	Yourlast5	Yournext5	Jobsecurity	Income	Ideology	Dem	Rep
1	TAXHIGH						+	-	+
2	DEFICIT								
3	FORAID	-						-	
4	IMMIG			-					
5	TAXBREAK								
6	INADEDUC								
7	WELFARE								
8	AA								-
9	HARDWORK			-					
10	REG						+	-	
11	SAVINGS								
12	PROFHIGH						-		
13	EXECPAY		-					+	
14	BUSPROD			+					
15	TECH								
16	OVERSEAS						-		
17	DOWNSIZE						-		
18	COMPEDUC						-		
19	TAXCUT						+	-	+
20	WOMENWORK								-
21	TECHGOOD								
22	TRADEAG								
23	DOWNGOOD	+							
24	CHANGE20								
25	TRADEJOB					-			
26	WHYGASSD					+			
27	PRES			-					
28	GASPRICE						+		
29	NEWJOB						+		
30	GAP20								-
31	INCOME20					+			
32	WAGE20					+			
33	NEED2EARN								
34	STAN5	+		+			+		
35	CHILDGEN	+		+			+		
36	CHILDSTAN			+			+		
37	CURECON				+				

NOTE.—+ = positive and significant at the 5% level; - = negative and significant at the 5% level.

economists themselves. Those who expect their own income to rise are more pessimistic about business productivity growth and the president's ability to affect the economy and more optimistic about immigration, the work ethic, and the future of the economy.⁴³

The leading correlates of economists' disagreement are political—ideology and, to a lesser extent, party affiliation. Liberal Democratic and conservative Republican economists disagree in expected ways about taxes, regulation,

⁴³ The variable identifiers are BUSPROD, PRES, IMMIG, HARDWORK, STAN5, CHILDGEN, and CHILDSTAN.

excessive profits and executive pay, and some employment-related issues. Conservative economists are also markedly more optimistic about the country's economic future.⁴⁴ Note, however, that there is little evidence of an ideological divide over the economy's past or present performance. Economists across the political spectrum can largely agree about the path of inequality, real income, and real wages over the past two decades.⁴⁵

Compared to the results for the whole sample, the statistical significance of the ideology coefficients falls (unsurprising given the reduced number of observations), but their absolute magnitude tends to rise. As John Zaller⁴⁶ documents, this is a common pattern: highly educated respondents match ideological stereotypes much more closely than less-educated respondents who use the same ideological label.⁴⁷ Needless to say, the connection between economists' beliefs and their ideology could easily reflect reverse causation. Economists might choose ideologies because they fit well with their understanding of how the economy works.⁴⁸

B. Belief Dispersion: How Economists and the Public Compare

How does economists' level of belief dispersion compare with the public's? Are economists more able to agree than the public, or vice versa?⁴⁹ One possibility is that the public continues to debate matters that professional economists see as settled. Another is that the public largely has its mind made up even though many economists doubt that the conventional wisdom is correct.

It turns out that the former hypothesis is closer to the truth: the beliefs of economists are moderately less dispersed than the public's. Table 2 separately lists the standard deviations of responses for the public and economists; the average standard deviation for the public is .694, compared to .589 for economists. The hypothesis that these values are equal can be rejected at the 1 percent level. Normalizing the beliefs in Table 2 on a 0–1 scale and recalculating the standard deviations does not change this result.

While economists' standard deviations are typically smaller than the public's, the correlation between the two is close to zero. Occasionally, then, economists' level of consensus sharply exceeds that of the public. For example, almost all economists see technological progress as beneficial, but

⁴⁴ The variable identifiers are TAXHIGH, TAXCUT, REG, PROFHIGH, EXECPAY, OVERSEAS, DOWNSIZE, COMPEDEC, NEWJOB, STAN5, CHILDGEN, and CHILDSTAN.

⁴⁵ The variable identifiers are GAP20, INCOME20, and WAGE20.

⁴⁶ See John Zaller, *The Nature of Origins of Mass Opinion* (1992).

⁴⁷ Replacing Ideology with Ideology \times Education and rerunning the equations in Section III reveals that this generalization also works for the broader public. Economists are about as "ideological" as those with Ph.D.s in general.

⁴⁸ Fuchs, Krueger, & Poterba, *supra* note 9, however, cast doubt on this possibility, finding that policy positions are more closely related to values than estimates of relevant parameters.

⁴⁹ I am indebted to an anonymous referee for raising this question.

the public is divided: the standard deviation of belief is .14 for the former versus .76 for the latter. Economists are also exceptionally certain about foreign aid, immigration, excessive profits, trade agreements, the current state of the economy, and the long-run consequences of current economic disruptions.⁵⁰ In a handful of other cases, the public is quite certain, but economists have yet to reach a consensus. While economists continue to argue, the public has largely decided that the deficit and excessive taxes are serious problems, new jobs are low paying, and real income and wages fell over the last 20 years.⁵¹

VI. CONCLUSION

There is a segment of the population that finds the economic way of thinking relatively congenial. It is not the wealthy, however, nor is it conservative ideologues. Rather, the empirical core of this paper shows that people tend to agree with economists (1) if they are well educated, (2) if they are male, (3) if they recently experienced income growth, (4) if they expect income growth, or (5) if they have a high degree of job security. These findings are remarkably strong and consistent across a wide variety of beliefs. Section IV's formal analysis underscores the robustness of these findings. The *e* coefficients—positive and highly significant without exception—reflect the fact that all economic variables tend to work in the same direction. The *w* coefficients—also highly significant as a group—reflect the fact that the set of economic variables exerts a powerful influence on economic beliefs.

In the political science literature, there are close parallels to my results for education, gender, and income. On tests of objective political knowledge, Michael Delli Carpini and Scott Keeter⁵² show that education and male gender predict markedly higher scores, while income makes little difference. Scoring the number of "correct" answers to the SAEE's questions is admittedly less clear-cut. But it may be more than a coincidence that people with demonstrably greater political knowledge are also much less likely to strongly dissent from the beliefs typical of professional economists.

In contrast, to the best of my knowledge, nothing similar to my findings for income growth and job security have been reported by previous researchers. Perhaps this is only because few data sets of political and economic beliefs contain these variables. But there may be something unusual about economic beliefs that makes income growth and job security relevant. Re-

⁵⁰ The variable identifiers are TECH, FORAID, IMMIG, PROFHIGH, TECHGOOD, TRADEAG, CURECON, and CHANGE20.

⁵¹ The variable identifiers are DEFICIT, TAXHIGH, TAXCUT, NEWJOB, INCOME20, and WAGE20.

⁵² Michael X. Delli Carpini & Scott Keeter, *What Americans Know about Politics and Why It Matters* (1996).

solving this question will have to be left for future research; the main challenge is to explain why income growth and job security matter, even though income level does not.

Incorporating this paper's empirical results into political economy models seems like an especially promising direction for further research. My findings suggest, for example, that the quality of economic policy is increasing in both the level of education and rate of economic growth. Thus, both growth and stagnation can be self-reinforcing.⁵³ Similarly, changes in the franchise that reduce the median level of economic literacy should be expected to have a negative impact on the quality of economic policy. At the most general level, if economists' mean beliefs about how the economy works are correct, then analyzing the voting public through a rational expectations lens⁵⁴ probably yields a distorted account of how democracies work. Verifying these conjectures must be left for future research.

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⁵³ See note 34 *supra*.

⁵⁴ See Donald Wittman, *Rational Expectations and Democratic Politics* (Working paper, Univ. Chicago 1999); Donald Wittman, *The Myth of Democratic Failure: Why Political Institutions Are Efficient* (1995); and Donald Wittman, *Why Democracies Produce Efficient Results*, 97 *J. Pol. Econ.* 1395 (1989).

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