NBER WORKING PAPER SERIES

WHY DO ECONOMISTS DISAGREE ABOUT POLICY? THE ROLES OF BELIEFS ABOUT PARAMETERS AND VALUES

Victor R. Fuchs
Alan B. Krueger
James M. Poterba

Working Paper 6151
http://www.nber.org/papers/w6151

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
August 1997

Fuchs acknowledges financial support from The Robert Wood Johnson and Andrew W. Mellon Foundations to the National Bureau of Economic Research; Krueger from the Princeton Industrial Relations Section; and Poterba from the National Science Foundation to the National Bureau of Economic Research. We are grateful to the survey respondents for their cooperation; to Claire Gilchrist who administered the survey and served as secretary for the project; and to Deborah K. Kerwin-Peck who processed the data, prepared the tables, and made many editorial improvements. For helpful comments, we thank the participants at workshops at Harvard-MIT, Princeton, and Stanford; and Kenneth Arrow, David Cutler, Peter Diamond, Martin Feldstein, Daniel Kahnemann, Daniel Kammen, Mark McClellan, Lincoln Moses, John Pencavel, and A. Mitchell Polinsky. This paper is part of NBER's research programs in Labor Studies and Public Economics. Any opinions expressed are those of the authors and not those of the National Bureau of Economic Research.

Why Do Economists Disagree About Policy?
The Roles of Beliefs About Parameters and Values
Victor R. Fuchs, Alan B. Krueger
and James M. Poterba
NBER Working Paper No. 6151
August 1997
JEL Nos. H00, J00, A1
Labor Studies and Public Economics

ABSTRACT

This paper reports the results of surveys of specialists in labor economics and public economics at 40 leading research universities in the United States. Respondents provided opinions of policy proposals; quantitative best estimates and 95% confidence intervals for economic parameters; answers to values questions regarding income redistribution, efficiency versus equity, and individual versus social responsibility; and their political party identification.

We find considerable disagreement among economists about policy proposals. Their positions on policy are more closely related to their values than to their estimates of relevant economic parameters or to their political party identification. Average best estimates of the economic parameters agree well with the ranges summarized in surveys of relevant literature, but the individual best estimates are usually widely dispersed. Moreover, economists, like experts in many fields, appear more confident of their estimates than the substantial cross-respondent variation in estimates would warrant. Finally, although the confidence intervals in general appear to be too narrow, respondents whose best estimates are farther from the median tend to give wider confidence intervals for those estimates.

Victor R. Fuchs
National Bureau of Economic Research
204 Junipero Serra Boulevard
Stanford, CA 94305
claire@newage3.stanford.edu

Alan B. Krueger
Woodrow Wilson School
Princeton University
Princeton, NJ 08544
and NBER
akrueger@pucc.princeton.edu

James M. Poterba
Department of Economics
Massachusetts Institute of Technology
E52-350
Cambridge, MA 02139-4307
and NBER
poterba@mit.edu

Why Do Economists Disagree About Policy? The Roles of Beliefs About Parameters and Values

Victor R. Fuchs, Alan B. Krueger, and James M. Poterba

Winston Churchill is supposed to have complained that whenever he asked Britain's three leading economists for advice about economic policy he received four different opinions--two from John Maynard Keynes. The image of economists in disarray about economic policy is firmly embedded in the popular mind, enhanced, no doubt, by the tendency of many journalists to seek out extreme opposing views on controversial issues. But is the popular image justified? A large-scale (464 respondents) survey of economists in all fields (Alston, Kearl, and Vaughan, 1992) concluded that there is considerable consensus among economists, but the 40 questions in their survey dealt primarily with positive economics, not economic policy. The seven questions that were clearly about policy--unconditional "should" questions--had a mean entropy score of 0.83, which indicates a very high level of disagreement.[1]

In a survey of 50 leading health economists, Fuchs (1996) found considerable disagreement regarding major issues of health policy.[2] The extent of disagreement was particularly striking when compared with the high level of agreement among the same economists about the determinants of health and the determinants of health expenditures.[3] Furthermore, the small disagreement that did exist regarding the positive questions seemed to play no role in explaining policy differences. This result is at variance with Milton Friedman's view (1953) that policy differences can usually be explained by differences in judgments about positive economics.

This paper reports the results of surveys of specialists in labor economics and public economics at 40 leading research universities in the United States. We ascertained their opinions of economic policies in their areas of specialization and measured the extent of agreement or disagreement. We also attempted to determine the extent to which policy disagreement is related

---

[1]Each question allowed three possible answers: disagree, agree, or agree with proviso. The highest possible entropy score is 1.0, indicating that respondents were evenly split among the three answers. A score of zero indicates that all respondents chose the same answer.

[2]The mean entropy score was 0.77 for two possible answers: disagree or agree.

[3]The mean entropy score was 0.52.

to a) differences in estimates of relevant economic parameters; b) differences in values; and c) differences in political party identification. We used the respondents' opinions regarding their 95% confidence intervals[4] for the economic parameters to determine how often the average best estimate, or most commonly occurring estimate, falls within these intervals. We also compared their individual uncertainties with the collective uncertainties as reflected in variation across respondents in the best estimates of the economic parameters.

Description of Surveys

Four main types of questions were used in both the Labor Economics and Public Economics surveys:[5] a) policy opinions to be answered on a continuous scale from "strongly oppose" to "strongly favor"; b) quantitative best estimates and 95% confidence intervals for economic parameters; c) values questions (answered on a continuous scale) regarding income redistribution, efficiency vs. equity, and individual vs. social responsibility;[6] and d) political party identification. The two surveys are very similar in form, but nearly all of the policy and economic parameter questions are specialty-specific. Two of the policy questions (about increasing AFDC payments and eliminating the cap on OASI payroll taxes) and two of the parameter questions (on the Marshallian and Hicksian labor supply elasticities for men 25-54) are the same in both surveys.

The surveys were distributed in the summer of 1996 to economists specializing in labor economics and public economics on the faculties of the universities with the 40 leading economics departments in the United States. The 40 leading economics departments were identified from Scott and Mitias's (1996) ranking of departments, which is based on publication records of the faculty. Specialists at these universities were identified from listings in the American Economic Association directory, college catalogs, the 1996 ***Prentice-Hall Guide to Economics Faculty,*** and by personal knowledge. All labor economists and public finance economists in the economics

---

[4]Respondents were asked to specify lower and upper limits of a 95% confidence interval and told that these limits need not be symmetrical around the best estimate. The term "subjective probability interval" might be more appropriate than "confidence interval," but we use the latter term in the paper because that was the one used in the survey.

[5]See Appendix for copies of the surveys.

[6]The questions referred to as "values" could also be described as "meta" or "non-specific" policy preferences. The empirical relationship between the responses to these questions and opinions about specific policies, and the methodological issue involved in attempting to distinguish "values" from positive questions, are discussed below.

departments at universities with a top 40 economics department were sent a questionnaire. In addition, questionnaires were sent to many labor and public finance economists at the business schools and public policy schools at these universities.[7] A covering letter (see Appendix) explained the general purpose of the survey and promised anonymity to the respondents. Fuchs' secretary at the National Bureau of Economic Research kept track of the responses in order to facilitate the sending of a follow-up request after two months. A total of 65 replies (response rate 39%) was received for Labor Economics, and 69 replies (response rate 66%) for Public Economics. There was no significant difference between the responders and nonresponders with respect to university rank in either survey.[8] Every question provided a "no opinion" option; the percent responding "no opinion" or not providing an answer to each question is reported in the survey results.

In the Labor Economics questionnaire, we implemented a "split-ballot" experiment in which the order of the policy and economic parameter questions was randomly reversed in half the questionnaires. Except for one question--the desirability of increasing AFDC benefits--the order of the questions had a statistically insignificant effect on the mean responses to the policy and parameters questions. (Respondents were less likely to support an increase in AFDC benefits if the questions on the parameters preceded the policy questions, even if we condition on covariates such as political affiliation and views concerning redistribution.) The response rate was lower, however, if the economic parameters preceded the policy questions. We interpret the results of the split-ballot experiment as providing mild support that the questions elicited views that were not easily manipulated, although the response rate is higher if less technical questions are asked first.

---

[7]The Labor Economics survey was sent to all self-identified labor economists at these universities, while the Public Economics survey was mailed to only a subset of economists outside of economics departments. This may explain the larger set of economists who were sent the Labor Economics survey, as well as the lower response rate on the Labor than the Public Economics survey.

[8]In the Labor Economics survey the mean departmental rank (standard error in parentheses) was 17.9 (1.3) for the responders and 16.8 (1.2) for the nonresponders. In the Public Economics survey the corresponding figures were 17.3 (1.4) and 16.2 (1.7). Alston, Kearl, and Vaughan (1992) reported a much lower response rate (29%) for economists in the 10 leading graduate programs than for other members of the American Economic Association (40%).

Major Conclusions

Before discussing the survey results in detail, we summarize the major conclusions of the study. First, both surveys reveal a great deal of disagreement among economists about policy proposals in their areas of specialization. Only one of the 13 proposals (a 25 cent per gallon increase in the gasoline tax) elicited a strong consensus either in favor or in opposition. Second, policy positions are usually more closely related to differences in values than to differences in estimates of relevant economic parameters or to differences in political party identification. This is clearly evident for both surveys in simple correlations among the different types of variables and in multiple regression analyses. Third, the average best estimates of the economic parameters agree well with the ranges summarized in surveys of the relevant literature, but the individual best estimates are usually widely dispersed around the averages. Moreover, economists, like experts in many fields, reveal considerable "overconfidence" in their estimates of the economic parameters. For most questions, a large proportion of the individual confidence intervals do not include the average best estimate, or even include the value that is covered by the largest number of confidence intervals. Furthermore, many confidence intervals are small relative to the dispersion of the individual best estimates. Finally, although the confidence intervals in general appear to be too narrow, for most questions there is a significant positive correlation between the width of individual confidence intervals and the absolute deviation of individual best estimates from the median best estimate. That is, respondents whose best estimates are farther from the median tend to give wider confidence intervals for those estimates.

Policy Proposals

Table 1 summarizes the responses to the policy questions, which were marked on a continuous scale from "strongly oppose" (given a value of zero) to "strongly favor" (given a value of 100), with the neutral mark in the center of the scale given a value of 50. The most striking result is the extensive disagreement among economists about policy proposals in their specialty. The median standard deviations are 28.5 for Labor Economics and 29.3 for Public Economics. Both are more than half the maximum possible standard deviation of 50 which would result if half the respondents were at one extreme and half at the other. If replies were distributed uniformly across the entire range the standard deviation would be 28.9, which is close to the observed values. The median interquartile ranges are 43.6 for Labor Economics and 45.0 for Public Economics, almost half the maximum possible range of 100. In theory the standard deviation and

the interquartile range could be large even though all the respondents opposed or favored a policy proposal.[9] In practice, however, for only one of the 13 questions (an increase in the gasoline tax) are at least 75% of the respondents either in favor of or opposed to the policy proposal.

Measured by the average (mean or median) response, labor economists are opposed to increasing AFDC benefits (Q1), eliminating affirmative action (Q3), and eliminating job training (Q5). They are in favor of eliminating the OASI cap and reducing the payroll tax rate (Q2) and are essentially indifferent about increasing the minimum wage (Q4) and increasing unionization (Q6). The Public Economics respondents oppose increasing AFDC benefits (Q1) and adopting a value added tax (Q3). They favor increasing the gasoline tax (Q2), state (rather than local) finance of public education (Q6), and mandatory savings accounts (Q7); they are indifferent about eliminating the OASI cap (Q4) and expanding IRAs (Q5).

The greatest differences of opinion (measured by the standard deviation and the interquartile range) among labor economists are over elimination of affirmative action and elimination of job training. In Public Economics the differences of opinion are greatest for elimination of the OASI cap and expansion of IRAs.

One possible explanation for the substantial differences in policy views is that different respondents interpret our policy questions to mean different things. For some questions, such as the mandatory saving accounts question on the Public Economics survey, there are many detailed features of policy design that would need to be worked out before a policy could be enacted. Differences in interpretation could play a role in contributing to response variation on these questions. Other questions, however, are relatively well defined. Raising the minimum wage and increasing the gasoline tax are examples of policies where we do not think there is substantial scope for differential interpretation to explain the disparate views.

Estimates of Economic Parameters

Most of the quantitative parameters we inquired about (such as the elasticity of labor supply) are discussed in economics graduate courses and textbooks; a few (such as the markup on private annuity contracts) are more esoteric. At least for questions like the labor supply and labor demand elasticities, we would expect economists in these fields to have given these parameters a

---

[9]For example, if half of the respondents scored a proposal at 51, and the other half scored it at 100, then the interquartile range would be 49, and the standard deviation would be 24.5, even though all of the respondents would favor the proposal.

good deal of thought. In general, the mean and median best estimates of the various economic parameters reported in Table 2 accord quite well with the ranges established in surveys of the relevant literature. There is frequently great variability in the best estimates of the parameters across members of the profession, however. We begin the discussion by considering the labor supply questions which are common to both surveys and then highlight specific parameters in each survey.

Common Questions. We asked labor and public economists about both compensated (Hicksian) and uncompensated (Marshallian) labor supply elasticities. The labor economists were asked about these parameters separately for prime-age men and women (Q14-Q17); the public finance economists were asked identical questions for prime age-men (Q11 and Q12). The similarity between the public finance and labor economists is striking. The typical respondent in either field believes the male uncompensated labor supply elasticity is close to zero (median of 0.00 for labor economists and .05 for public finance economists), while the compensated elasticity is small (.20 for both labor and public finance economists). The responses in both surveys are consistent with much of the empirical research in labor economics, surveyed for example in Killingsworth (1983) and Pencavel (1987), which finds small wage and income effects for male labor supply.

Also consistent with the literature, the labor economists tended to report larger compensated and uncompensated labor supply elasticities for women than for men. For example, the median compensated female labor supply elasticity was .43, twice as high as the median estimate for men. There was also substantial dispersion across labor economists in their best estimates of the female labor supply elasticities. The interquartile range of the compensated female labor supply elasticity was .60, some three times as great as the corresponding interquartile range for men.

Labor Economics. The median best estimate of the output-constant wage elasticity of labor demand (Q9) is exactly equal to Hamermesh's (1993) "best guess" (-.30) based on his comprehensive review of the literature. The mean and median best estimates of the total wage elasticity of labor demand (Q8) are also well within the range identified in Hamermesh's survey. Additionally, the median labor economist reported that a 10 percent increase in the minimum wage would be associated with a 1 percent decrease in teenage employment (Q13), which coincides with Brown, Gilroy, and Kohen's (1983) preferred estimate of this parameter based on

time-series data.[10] We would expect that economists with a higher estimate of job loss due to a minimum wage increase would be less supportive of the recently passed increase in the minimum wage, a policy question which we also inquired about.

The mean and median best estimates of the effect of JTPA job training on earnings also agree well with commonly accepted estimates in the literature. Several studies, for example, find that the proportionate payoff to job training is greater for women than for men (see LaLonde, 1995 for a survey). The median estimate among labor economists of the earnings effect is 7 percent for adult women and 2 percent for adult men (Q11-12). Estimates in the literature tend to be quite small for disadvantaged youth (see LaLonde, 1995); the small median best estimate for youth (Q10) may even overstate the typical estimate in the literature. Those reporting larger estimates of the payoff to job training would be expected to oppose eliminating the JTPA program.

In the job training field, many labor economists are currently engaged in a productive debate on the efficacy of experimental and non-experimental methods (see Heckman and Smith, 1995, for example). With this in mind, we asked a methodological question (Q21) about job training, namely whether respondents would give more credence to results coming from studies that employ randomized assignment or structural modeling. Three quarters of respondents favored random assignment, but a significant minority strongly preferred structural modeling. Thus, there is not complete consensus on methods in this field.

The median estimate of the effect of unions on wages is 15 percent (Q18), which agrees extremely well with Lewis' (1963, 1986) literature reviews and re-analyses. There is a notably tight range of best estimates for this parameter, with the 25th percentile at 10 percent and the 75th at 15 percent. The median best estimate of the effect of unions on productivity (Q19) is zero, while the mean is slightly positive. The interquartile range is a sizable 10 percentage points. Given the controversy in the literature over the effect of unions on productivity (such as the views spanned by Freeman and Medoff, 1984 and Hirsch and Addison, 1986), this finding strikes us as quite reasonable.

---

[10]A replication of Brown, Gilroy and Kohen by Wellington (1991) with more recent data is about half as large and not significantly different from zero, however.

The questionnaire contained a policy question concerning views towards permitting unions to form if a majority of workers sign cards supporting a union. Allowing card signings would most likely increase union representation, so economists who believe unions have a positive effect on productivity should be more likely to favor card signings. The presumed magnitude of the union wage effect, however, could have two offsetting influences on normative views toward unions. On the one hand, a larger union wage effect might be expected to increase the allocative distortion associated with unions. On the other hand, a larger union wage effect would imply a greater redistributive effect of unions toward workers. Thus, the magnitude of the union wage effect is expected to have an ambiguous impact on support for card signings.

The typical economist attributes about one-fifth of the male-female wage gap to employer discrimination. We would expect that economists who report a larger proportion due to discrimination to more strongly oppose the elimination of affirmative action.

Another feature of the averages of the best estimates is that they may be internally consistent even though many of the individual economists' responses may not be. For example, in the static tax incidence model, the share of a payroll tax borne by employers is determined by the ratio of the labor supply elasticity to the sum of the labor supply plus labor demand elasticities. The average of the median labor economists' best estimates of the uncompensated labor supply elasticities for men and women is .15. Thus, the collective wisdom of the profession would imply that 23 percent (.15/.65) of the burden of a payroll tax is borne by employers. This implied estimate is quite close to the 26 percent mean best estimate of the employer's share of the payroll tax (Q13).

Public Economics. In addition to the questions about labor supply elasticities described above, respondents to the Public Economics survey were also asked about a number of other parameters that might affect their policy views. They were asked for their best estimates of the compensated price elasticity of demand for gasoline over a horizon of two to five years (Q9). The median response on this question was -0.40, which is bounded by Dahl's (1986) finding, in her survey of empirical studies on gasoline demand, of -0.3 as the short-run demand elasticity and -0.55 as the long-run elasticity. More than half of the respondents suggested a best estimate for this elasticity of between -0.3 and -0.7. This parameter should play a role in a respondent's assessment of the desirability of raising the gasoline excise tax, with higher elasticities associated with higher deadweight losses from the tax, and therefore less support for raising the tax.

We asked several questions about the taxation of capital income and its effect on investment and economic growth. The median estimate of the economic growth effects of replacing all

capital income taxes with wage taxes (Q10) was a 0.2 percentage point annual growth increase. Respondents displayed substantial dispersion in their best estimate of this parameter, however. The 25th percentile response was 0.01 percentage points, and the 75th percentile response was 0.50 percentage points. This spread reflects substantial dispersion in the results that emerge from computable general equilibrium models that are used to study the effects of fundamental tax reform. Auerbach and Kotlikoff (1987) show using a numerical model that the effect of a switch from income to wage taxation is sensitive to discount rates and factor supply elasticities.

Allowing firms to expense their capital outlays, rather than depreciate them as under current law, and making up the resulting revenue shortfall by raising the statutory corporate income tax rate, is generally recognized as a pro-investment policy. The median best estimate of the resulting increase in plant and equipment investment (Q8) is 10 percent, with an interquartile range of 5 to 15 percent. There is currently a substantial empirical controversy, summarized for example in Cummins, Hassett, and Hubbard (1995), on the effect of investment tax credits and depreciation incentives on corporate investment. Our survey results are more consistent with those who argue that investment incentives affect investment outlays than with those who take the opposite view. Those who believe that reducing the tax burden on new investment has a large effect on such investment should be more likely to support policy reforms that shift the tax burden from capital income to labor income or consumption, such as replacing the current income tax with a value added tax.

We asked one question (Q18) about the concentration of capital ownership: what fraction of net worth is held by the richest one percent of households? The median response, 30 percent, is close to the estimated value of 28.6 percent from the 1992 Survey of Consumer Finances reported in Poterba and Samwick (1995). There was substantial variation in the answers to this question, however, with an interquartile range of thirty percentage points. This was also the question with the lowest nonresponse rate; only three of sixty-nine survey respondents did not answer. This may reflect the "factual" nature of this question, which is not affected by issues of estimation strategy, model specification, or data choice. The concentration of wealth could affect respondents' views on switching from capital to wage or consumption taxation, since it determines the concentration of the gains or losses from such a policy switch.

We also asked about the effect of recent tax changes on economic growth. The median response indicated that, had the Tax Reform Act of 1986 (TRA86) been allowed to remain in force as passed, the steady-state GDP growth rate would have been one percent per year higher

than under the previous tax system (Q20). TRA86 reduced inter-asset differences in effective tax rates, and it lowered marginal tax rates on labor income for a substantial number of higher-income households. Reflecting the lack of consensus on some of the underlying parameters which determine the effects of such a policy, however, the interquartile range for the responses to this question is large: 0.2 percentage points to 3.0 percentage points.

In contrast to the results for TRA86, the median response to a question on how the Budget Enforcement Act of 1993 (BEA93) would affect economic growth (Q21) was zero. BEA93 raised tax rates on a small set of high-income taxpayers, unlike the broad-based changes in tax rates that were enacted in 1986. The interquartile range of 1.5 percentage points for the responses regarding the 1993 legislation was smaller than the range of 2.8 percentage points for the 1986 legislation. Comparing the best estimates of the consequences of either tax bill with the observed effects of these tax reforms is difficult, since there is no way to hold constant all of the other factors that affect actual growth rates.

One specific question (Q13) concerned the impact of Individual Retirement Accounts (IRAs) on national saving. Because IRAs were restricted by the 1986 Tax Reform Act, our question focused on the effect of IRAs in the 1981-1986 period. Most public economists believe that there is a noticeable positive effect of IRA contributions on national saving, equal to roughly 20 percent of these contributions. It is important to note that this represents an addition to ***national***, not personal, saving, and it is therefore net of any reduction in other personal saving or other government saving. The consensus view generally supports Poterba, Venti, and Wise's (1996) conclusion that a substantial fraction of the inflow to IRAs represented new personal saving. If IRA contributions are deducted from federal income taxes at a typical marginal tax rate of 25 percent, so that one-quarter of IRA contributions represent a reduction in national saving through lost current government revenue, the median estimate from our survey respondents suggests that roughly half of IRA contributions represent additions to personal saving.[11]

Our survey included three questions that bear on the current Social Security reform debate. The first (Q14) asked about the price of individual annuity contracts available in the private market relative to the actuarially fair value of these contracts. If the current price of annuities is high relative to their actuarial value, government-provided Social Security is generally

[11]This estimate stands in contrast to Engen, Gale, and Scholz' (1996) claim that most IRA saving has come at the expense of other personal saving.

viewed as more attractive, since it offers individuals a real annuity. Friedman and Warshawsky (1990) present evidence that the ratio we asked about was between 1.3 and 1.5 in the early 1980s. The survey responses are close to this range, with a median of 1.30, and an interquartile range of 1.2 to 1.5. However, this rather specialized question resulted in a high rate of nonresponse, with 35 percent of our respondents choosing not to answer. There was the same nonresponse rate on our question about the effects of expensing on corporate investment, and a 30 percent rate of nonresponse on the question concerning the economic growth effects of the Tax Reform Act of 1986.[12] The highest rate of nonresponse (51 percent) was to the question on the effects of the 1993 tax legislation. The nonresponse rates tend to be lower on questions that would feature more prominently in an undergraduate field course in public economics.

The second question that we asked about Social Security concerned the ratio of the administrative costs from a system of mandatory private saving accounts, and the current pay-as-you-go defined benefit system (Q19). There are many current proposals to create systems of mandatory private saving accounts as part of Social Security reform, patterned to various degrees on the experiences in other countries (see Gramlich (1996) for an overview). The greater is the ratio of administrative costs from a system of individual accounts relative to the current system, the less attractive the reform options appear. This is a highly speculative question, since it is not clear how the experience of other nations would generalize to the United States, or how the U.S. historical experience applies today. Thus it is no surprise that there is wide dispersion in the responses. The median estimate is a cost ratio of 1.5 to 1, but the 25th percentile response was 1 to 1, and the 75th percentile response was 3 to 1. Some responses indicated much larger values, as indicated by the difference between the mean and median responses on this question (2.6 versus 1.5) and the standard deviation of responses (2.7).

The final Social Security question that we asked concerned private saving. There has been a long-standing empirical debate concerning the effect of the current pay-as-you-go Social Security system in the United States on national saving; Feldstein (1974) and Barro (1974) represent early contributions to this debate. We asked respondents to estimate what the personal saving rate, which is currently about five percent of disposable income, would have been in the

---

[12]Auerbach and Slemrod (1997) provide a comprehensive survey of the academic research that has focused on the economic effects of TRA86. They conclude that it has been difficult to discern the consequences of the reform in part because of the complexity of the reform itself, and in part because many of the behavioral elasticities that determine the effect of tax changes may be small.

absence of a Social Security program (Q17). The responses clearly indicate that most public finance economists believe that the current Social Security program has reduced personal saving. The median response to our question suggested a private saving rate of eight percent of disposable income if there were no Social Security; this implies a three percent of disposable income saving reduction due to this program. These results represent an implicit rejection of the "Ricardian equivalence" view of budget deficits and unfunded Social Security programs suggested in Barro (1974).

We asked one question that bears on the choice of state versus local financing for public education: how would average student test scores be affected by centralizing school finance at the state level (Q15). Several recent empirical studies have suggested that state versus local financing affects student performance, but the studies, such as Hoxby (1995) and Fuchs and Reklis (1994), reach conflicting conclusions. The median response indicated that state funding would have no effect on test scores; the 25th percentile response was a -2.0 percentage point change, and the 75th percentile was a +2.0 percent change. These responses are consistent with relatively little clear evidence on this issue. Even though the small existing literature makes it unclear how respondents formed their views of how state financing affects student outcomes, the response to this question does have a strong predictive value in explaining respondents' views about how to finance schools.

One question where there remains substantial disagreement concerns the fraction of the corporate income tax that is borne by capital income (Q16). This is a question that is at the core of a substantial body of research in public economics, beginning with Harberger (1962), and subsequently including a number of computable general equilibrium studies. The median response is that 40 percent of the tax is borne by capital, but the interquartile range spans 45 percentage points, from 20 to 65 percent. The responses suggest that public finance economists believe that the corporate income tax is borne by both capital and labor, but that there is significant disagreement about the precise division.

Textbook discussions also suggest substantial uncertainty in the allocation of the corporate tax burden. Atkinson and Stiglitz (1980), for example, draw on earlier studies and suggest that capital's burden is from 0.62 to 1.6 times the revenue collected with a corporate income tax. Rosen (1995) is more agnostic, and simply writes that "the economic consequences of the corporation tax are among the most controversial subjects in public finance." Part of this disagreement may reflect different views about key parameters that affect the burden of corporate income taxes,

such as the degree of openness of world capital markets and the interest elasticity of saving. It is also possible that many recent studies have focused on the efficiency gains of shifting from current corporate income tax rules to alternative rules, and that as a result, the incidence questions that once received greater attention are no longer as salient for public finance researchers.

Values and Political Party Identification

Responses to the values questions (see Table 3) were scored on a continuous scale from zero for the extreme left to 100 for the extreme right. There is considerable difference among the respondents with regard to values, but the differences are smaller than for the policy questions.[13] The median standard deviation is 23.7 for Labor Economics and 21.4 for Public Economics, somewhat less than for the policy questions. The median interquartile range is 27.3 for Labor Economics and 26.0 for Public Economics, much less than for the policy questions. Differences about policy may depend not only on differences in values but also on differences in predictions about the consequences of policies even when values are identical.

The average responses to the values questions mostly fall in the middle of the range. In both surveys only one of the four questions--increase redistribution with lump sum transfers--has the mean and the median more than ten points above (in this case) or below the neutral mark. In Public Economics the median (but not the mean) score for social vs. individual responsibility is also more than ten points away from the neutral mark, in favor of individual responsibility.

The responses to the values questions are similar in the two surveys, with one significant exception: the Public Economics respondents place a higher value on efficiency than do the Labor Economists. This can be inferred from the difference in their responses to Questions 22 and 23. The former asks about income redistribution, while the latter asks the same question under the assumption that redistribution could be accomplished without any efficiency loss. When each respondent's response to Q22 is subtracted from their response to Q23, the mean difference for Public Economics is 16.41 (1.36), while the mean for Labor Economics is 11.55 (1.92). The difference between the means is significant at $p < .05$. A difference between the two groups of specialists can also be seen in the responses to Q24 concerning the efficiency-equity tradeoff. The mean response for Public Economics is 55 (3.00), while for Labor Economics it is only 48 (2.90).

---

[13]The wording of the values questions (different from the "strongly oppose--strongly favor" wording of the policy questions) may help explain the smaller extent of disagreement.

The difference between the means is significant at $p < .10$. The differences in the responses may reflect differences in the focus of the two fields. Public economics is centrally concerned with the tradeoffs between efficiency and equity, and with the design of policies to minimize deadweight losses, while these issues may receive less attention in labor economics.

The four values questions are highly correlated with one another in both surveys: the median coefficient (absolute value) is 0.71; the range is from 0.52 to 0.83.[14] The two income distribution questions are positively correlated with social responsibility and all three are negatively correlated with the efficiency-equity choice. When the direction of the latter is reversed, most respondents align consistently along a "left-right" political continuum defined as the left favoring more income redistribution, equity over efficiency, and social over individual responsibility.

Political party identification is approximately the same in both surveys: slightly more than half the respondents are Democrats, about one-fourth are Independents, and about one-sixth are Republicans. Party identification is closely related to responses to the values questions. Democrats lean to the left (as defined above), Republicans lean strongly to the right, and Independents are slightly to the right of center. The mean scores for the four values questions in Labor Economics are Democrats 62, Republicans 32, and Independents 46. In Public Economics, the mean scores are Democrats 67, Republicans 28, and Independents 46.[15]

Correlations Among Types of Variables

Table 4 summarizes the coefficients of correlation among the different types of questions.[16] We find that the relationship between values and policy opinions is much stronger than the relationship between values and economic parameters, or between economic parameters and policy opinions. We also find that the relationship between values and policy opinions is considerably stronger in Labor Economics (0.53) than in Public Economics (0.35). The difference between the distribution of coefficients in the two surveys is significant at $p < .05$ by the chi-square test. The difference between the surveys, however, appears to result from differences in

---

[14]The correlations among the policy questions are much lower, and the two surveys differ. The median coefficient (absolute value) is 0.39 for Labor Economics and 0.20 for Public Economics.

[15]The standard errors of the means are 2.3, 6.6, and 2.5 in Labor Economics and 2.0, 3.5, and 5.0 in Public Economics.

[16]Complete matrices of coefficients for all results summarized in this paper are available on request.

the questions rather than from differences between the two specialties when asked the same question. Of the eight (4 values x 2 policy questions) corresponding correlations, the Public Economics coefficients are higher in six cases. The median correlation coefficient for Public Economics is 0.57, but only 0.43 for Labor Economics.

The correlations between values and economic parameters, albeit small on average, are statistically significant more often than is likely to result from chance. There are two possible explanations. The estimates may be influenced by values and/or the respondents' estimates of parameters may influence their attitudes toward income redistribution, the tradeoff between efficiency and equity, and the like.

The correlations between policy opinions and economic parameters are substantially weaker than those between policy opinions and values. Furthermore, even when the correlations are limited to those that are theoretically related (for example, the elasticity of labor supply and the elimination of the OASI cap), the coefficients, on average, tend to be only slightly higher and are not significantly different from the other policy-parameter correlations.

Policy Proposal Regressions

We now consider the relationship between respondents' views on policy questions and their responses to our questions about economic parameters, values, and political party identification in a multivariate context. We present parallel results from the Labor Economics survey (Table 5) and the Public Economics survey (Table 6). Each table reports two sets of results.

The upper panel in each table reports summary statistics from regression analyses that relate a respondent's view on a policy issue to a subset of the respondent's answers on positive questions about economic parameters, along with his responses to questions about values and party affiliation. The underlying regression specification for POLICY response i by respondent j is:

$$POLICY_{i,j} = POSITIVE_{i,j}*\alpha_i + VALUES_j*\beta_i + PARTY_j*\gamma_i + \epsilon_{i,j}. \quad (1)$$

The positive questions that are included as explanatory variables in each equation depends on the policy question being analyzed, so POSITIVE depends on i. The explanatory variables for values and party are the same for all policy questions, so VALUES and PARTY are not policy-specific. The upper panels of Tables 5 and 6 report the p-values at which we reject the null hypothesis that $\alpha_i = 0$, $\beta_i = 0$, and $\gamma_i = 0$, respectively.

The lower panels report p-values for tests of the same coefficient restrictions, but from regressions that do not include all of the covariates in (1). Rather, we regressed responses to the policy questions on one of: (a) the set of positive variables, (b) the set of values variables, or (c) the set of party variables. An example of a specification that underlies the results in the lower panels is therefore

$$POLICY_{i,j} = VALUES_j * \beta_i + \epsilon_{i,j}. \quad (2)$$

The difference between the results in the upper and lower panels is a function of the changes in the coefficient estimates of the explanatory variables, and the precision of these estimates, when we expand the set of control variables.

For each policy question, we identify the set of positive questions about economic parameters that are most likely to bear on that question, and include the responses to those questions as the explanatory variables labeled "economic parameters." The set of economic parameter variables that are included in the regression specifications therefore varies from one policy question to another. Some of the issues that we have asked about are relatively simple policies, on which respondents' views are likely to depend on a relatively small set of economic parameters. Others are more complex policies for which views may be affected by a range of different parameter values. Tables 5 and 6 enumerate the set of economic parameter explanators used in each policy response regression.

Some of our regression specifications include the response to only a single question about an economic parameter, while others include responses to as many as seven different positive questions. When we attempt to explain policy positions on increasing the gasoline tax, for example, the only positive question that we include as an independent variable is the best estimate of the price elasticity of demand for gasoline. Similarly, for explaining views about changes in the payroll tax rate, we include only the Hicksian labor supply elasticity, and for increasing reliance on state financing of schools, we include only the respondent's belief about how state funding affects test scores.

At the other extreme, when we try to explain respondents' views about replacing the current federal income tax system with a value added tax, we include responses to seven positive questions, including the effect of more generous depreciation allowances (expensing) on capital investment, the Hicksian labor supply elasticity, the incidence of the corporate income tax, the concentration of household net worth, and the effect of two recent tax reforms (TRA86 and the 1993 Budget Enforcement Act) on the level of GDP. A long list of economic parameters are

relevant for views about the VAT because introducing a VAT would change tax rates on capital income as well as labor income, and it would have potentially substantial redistributive effects.

There are more policy questions with large numbers of explanatory economic parameters on the public economics survey than on the labor economics survey. The maximum number of explanatory parameters on a labor economics policy question is three, for the policy question about the elimination of job training. There are three public economics questions with three or more explanatory parameter questions. This may reflect the somewhat more complex nature of some of the policy questions in public economics.

Consider the findings for the labor economists first. The adjusted R^2s in the top panel of Table 5 indicate that one-fifth to one-half of the variability in policy positions can be accounted for by the variables we have identified. When all the explanatory variables are included in the model together, those measuring values consistently have a statistically significant effect on policy positions. The four values questions are highly correlated, which makes it difficult to interpret the effect of any one of these variables. In results not presented here, we have taken the simple average of the four values questions, and included this variable instead of the four separate values measures in the regression.[17] The estimated effects of this average "left value" variable consistently are in the direction that one would expect--labor economists expressing a stronger preference for redistribution, equity, and social responsibility are more likely to support an increase in AFDC benefits, elimination of the social security earnings cap, an increase in the minimum wage, and union card signings, and less likely to support the elimination of affirmative action or federal job training.

In the top panel of Table 5, the economic parameters only have a statistically significant effect at the .10 level for one policy--eliminating affirmative action. Economists who believe that a higher fraction of the male-female earnings gap is due to discrimination are more likely to oppose the elimination of affirmative action. When the economic parameters are included by themselves, the measures of the payoff to job training are significantly related to the hypothetical policy of eliminating federal job training programs (see bottom of Table 5). Additionally, labor economists who believe that unions enhance productivity are more supportive of card signings when the values and party variables are excluded from the equation. The insignificant effect of

[17]In calculating this average, we took 100 minus Q24 so that larger values of all the variables would imply more redistribution or equity.

most of the economic parameters is not due to a lack of dispersion in best estimates of the parameters; recall that there is considerable dispersion in the best estimates of the economic parameters among survey respondents.

Surprisingly, the expected teenage job loss due to the minimum wage is insignificantly related to labor economists' views towards a minimum wage hike. But if one large outlier is eliminated from the sample, the relationship becomes statistically significant. Even without this outlying observation, however, the employment effect of the minimum wage has an insignificant effect on normative views toward the minimum wage in the multiple regression model in the top panel of the table. The relatively weak relationship between economists' views of the effect of the minimum wage on employment and their policy position on the minimum wage is surprising in light of the rancorous debate over research on the employment effects of the minimum wage during the latest minimum wage increase. One explanation is that labor economists place greater weight on the distributional effects of the minimum wage than on the employment effects. Additionally, the debate could have been driven by policy interests from outside the profession, or by concern over the theoretical relevance of the research rather than its immediate policy relevance.

Political party has only a weak effect on policy positions when the four values measures are also included in the regression. But when the political party dummy variables are the only explanatory variables, they typically have a statistically significant and sizable impact on policy positions.

The results in Table 6 suggest that roughly one-fifth of the variation in respondent's views on typical policy questions in public economics is explicable using the set of economic parameter estimates, values, and measures of political party affiliation that we have collected. The median adjusted R^2 for the seven public economics policy questions is 0.21, which is less than half of the comparable measure for the six labor market policies that labor economists were asked to evaluate. We suspect that this disparity is explained by the greater complexity of many of the policy issues in public economics relative to those in labor economics, and not by systematic differences between public economists and labor economists. The adjusted R^2s on the two policy questions that were included in both the labor and public economics surveys (raising AFDC benefits and eliminating the cap on payroll tax earnings) are higher among public economists than among labor economists. This suggests that the lower median R^2 on the public economics questions is due to the questions, not the respondents.

The results in the upper panel of Table 6 indicate that in most cases we cannot reject either the null hypothesis that beliefs about economic parameters have no effect on policy choices, or the null hypothesis that party identification is unrelated to policy views. With respect to economic parameters, we reject the null hypothesis of zero coefficients on the included variables for only two policies--expanding IRAs, and increasing the role of states in funding public schools. At conventional confidence levels, we never reject the null hypothesis of no effect for the questions about the respondent's party identification.

The individual regression coefficients, which are not shown in Table 6, reveal coherent relationships between views on economic parameters and views on the policy issues of IRA expansion and changing state funding of education. With respect to IRAs, there is a strong and statistically significant relationship between the fraction of IRA contributions that a respondent thought represented a net addition to national saving, and the respondent's enthusiasm for expanding IRAs. With respect to school finance reform, those respondents who believed that a higher fraction of school funding from the state was associated with higher test scores were more likely to favor increased spending at the state level.

Our findings with respect to the predictive power of "values" questions are much stronger than those for economic parameters and political party affiliation. We reject the null hypothesis of no effect of "values" responses on policy views for five of the seven policy questions. The two questions where values do not appear to play a role are those regarding increased state-level funding of public education, and the institution of a system of mandatory saving accounts as a partial alternative to the current pay-as-you-go Social Security system.

To explore the relationship between values and policy views, we once again constructed the one-dimensional "left value" variable described above. Respondents with higher scores on this variable were more likely to support an increase in AFDC benefits, eliminating the OASDI tax cap, and state education financing. They were less likely to support adoption of a value added tax, perhaps because of the perceived regressive nature of this tax, or the expansion of IRAs. One interesting finding was a strong positive relationship between the "left value" score and support for raising the gasoline tax. While many have argued that the gasoline tax is regressive (although see Poterba (1991) for references as well as a contrary view), it may be that those who are concerned about equity are nevertheless prepared to raise the gasoline tax because of the expenditure programs that they envision higher revenues as supporting.

The lower panel of Table 6 presents the results from more limited regression specifications that relate policy views to one of the three sets of potential explanatory variables. Comparing these results with those in the upper panel suggests that there is substantial multicollinearity between "party" and "values." While we never reject the null hypothesis that the party affiliation variables are unrelated to policy views in the multivariate specifications, when party affiliation is the only explanatory variable, we reject this null hypothesis at conventional confidence levels for four of the seven policy variables. There is very little difference between the multivariate and the separate specifications in the results concerning the values variables. This pattern suggests that the values variables predict party variables. When values are included in the regression equation, they reduce the marginal explanatory power of the party variables.

In spite of the statistically significant coefficient estimates that emerge in the lower panel of Table 6, the more restricted regressions in the lower panel necessarily explain less of the variation in respondents' views on policy issues than the expanded regressions in the upper panel. For example, the restricted models with party identification as an independent variable explain only nine percent of the response variation for a typical policy question.

In summary, the regressions in both surveys explain a significant portion of the variance in policy opinions, but much remains unexplained, especially for the Public Economics proposals. In both surveys, the relationship between policy opinions and values is much stronger than between policy opinions and theoretically relevant economic parameters or political party identification.

Overconfidence of Respondents

Experts in many fields, ranging from demography to physics to stock price forecasting, evidence systematic overconfidence in their ability to provide quantitative estimates or predictions in their specialties.[18] In these fields, overconfidence has been assessed by comparing the predictions of experts to realizations of specific outcomes. For example, predictions about the weather can be compared to the actual weather. In our survey, we do not know the true parameter values with which to compare respondents' answers, so we define overconfidence in three ways: a) if a large proportion of the 95% confidence intervals do not include the average best estimate (mean or median); b) if the value that is covered by the largest number of confidence

[18]See Shlyakhter and Kammen (1992); Shlyakhter, Kammen, Broido, and Wilson (1994); Gordon and Kammen (1996).

intervals is nonetheless excluded from relatively many respondents' intervals;[19] c) if the average (mean or median) width of the confidence intervals is small relative to the variation in the best estimates (standard deviation or interquartile range).

In the first definition we rely on the assumption that the distribution of reported best estimates is centered on the true economic parameter. If this were the case, the mean and median would provide unbiased estimates of the true parameter. In principle, only 5% of the 95% confidence intervals would be expected to exclude the true parameter if respondents reported intervals independently. But because the mean or median best estimate is a noisy estimate of the true parameter, we could expect somewhat more than 5% to exclude the sample mean or median.[20] Our second definition provides a lower bound on the extent of overconfidence because it is possible that the value (or values) contained by the largest number of confidence intervals is not the true parameter. Thus, this definition provides a conservative measure of the extent of overconfidence. In the third definition, we assume the dispersion in reported best estimates represents the uncertainty underlying the profession's views of the true parameter. In this scenario, we can ask: Is the typical width of the 95% confidence intervals consistent with the underlying dispersion among members of the profession? If the width of the intervals is narrow relative to the dispersion in the profession, than the typical economist believes he or she has more precision than the profession.

Figure 1 displays these measures of overconfidence. According to our definitions, there is no overconfidence in situation I: both respondents (1 and 2) have 95% confidence intervals that contain the mean best estimate and the most commonly occurring value. (The most commonly occurring value falls in the range from the lower bound of C_2 to the upper bound of C_1.) The confidence intervals are also wide relative to the standard deviation of the best estimates.[21] In situation II there is overconfidence. The respondents have the same best estimates as in I, but each confidence interval is considerably narrower. Neither confidence interval includes the mean best estimate. Because the intervals do not overlap, one (but not both) encompasses the most

---

[19]This measure was suggested to us by Lincoln Moses.

[20]This statement follows if the best estimates are independent of the confidence intervals. If, as seems likely, the location of the confidence intervals is related to the best estimates, one might expect fewer than 5% of the intervals would fail to include the best estimate.

[21]In Figure 1, the standard deviation equals $(B_2-\bar{B}) = (\bar{B}-B_1)$. This assumes division by N rather than N-1.

commonly occurring value, so 50% reject the most accepted value. Moreover, the width of both intervals is small relative to the standard deviation of best estimates. In situation III the respondents have confidence intervals that are as wide as in I, but their best estimates are much farther apart. The result is similar to situation II. Neither confidence interval includes the mean best estimate, only one of them includes the most accepted value(s), and both are small relative to the standard deviation of the best estimates.

Table 7 shows that for most of the questions about economic parameters, the individual 95% confidence intervals do not include the mean best estimate for a large percentage of respondents. In the Labor Economics survey, 41.4% of reported confidence intervals fail to contain the mean best estimate of the parameter for the typical (median) question. This figure is lower for Public Economics at 33.6%, but still substantially above the 5% benchmark.[22] In both surveys for all questions, the confidence intervals are more likely to contain the median best estimate than the mean. For the typical question, the rejection rate of the median best estimate is 28.8% for Labor Economics and 21.5% for Public Economics.

The rejection rate for both the mean and the median exceeds 15% for almost every question in both surveys, with one notable exception. The mean best estimate of the effect of unions on wages (LE Q18) falls outside only 11.7% of the confidence intervals; for the median best estimate, the rejection rate is only 8.3%. Among the 20 questions in Table 7, this question stands out for the remarkable degree of unanimity among the respondents and the extent to which their individual confidence intervals embrace that unanimity. This probably reflects the influence of H. Gregg Lewis (1963,1986) who devoted many years to studying the impact of unions on wages and was able to reconcile the diverse findings of many different investigators.

The last column of Table 7 reports results for our second measure of overconfidence: the percent of confidence intervals that do not include the value that is contained in the largest number of intervals. For the median question in both surveys, 21% of intervals fail to include the most accepted value. For each question the fraction of intervals that exclude the most accepted value exceeds 5%, although the questions on the union wage effect (LE Q18), youth job training (LE Q10), and IRA's and savings (PE Q13) are notably close to the 5% rejection rate. Confidence

[22]Notice that by Chebyshev's inequality, at most one-quarter of a distribution can lie beyond two standard deviations of the mean. Thus if respondents implicitly placed two-standard-deviation bounds around their best estimates in providing confidence intervals, there is no conceivable distribution that reconciles the distribution of the best estimates with the confidence intervals.

intervals for the female labor supply elasticity (LE Q15) exhibit the highest rate of over-confidence, with 40.4% of intervals excluding the most accepted value. Because this measure of overconfidence provides a lower bound estimate of the proportion of intervals that exclude the true economic parameter, it is clear that a sizable portion of the profession evidences overconfidence in their answers.

Additional evidence of respondent overconfidence is presented in Table 8. In a normal distribution, the width of a symmetric 95% confidence interval is equal to 3.92 times the standard deviation. With this in mind, we compare the interval widths to the standard deviation of the best estimates across respondents. The standard deviation of the best estimates provides a plausible benchmark for the profession's uncertainty, which would be reflected in individual's confidence intervals if they were not overconfident. In the Labor Economics survey, however, only one question (the effect of unions on wages) has a mean confidence interval width of approximately four times the standard deviation of the best estimate; the median question has a ratio of 1.82. The median ratio in Public Economics is larger at 2.28, indicating wider confidence intervals on average relative to the variation in best estimates. To eliminate the possible role of outliers in the comparison of individual and collective uncertainty, we also compare the median confidence interval with the interquartile range of the best estimates. In a normal distribution, this ratio would be almost 3.0. Again we find that the average confidence interval is relatively narrow, with a median ratio of only 1.50 for Labor Economics. We again find that the median ratio is higher for Public Economics (2.00), consistent with the difference between the two surveys that was apparent in Table 7.

It is possible that the low ratios shown in Table 8 result from incomplete specification of the questions about economic parameters. For example, economists' estimates of the effect of job training on wages might differ, depending on the state of the labor market. If respondents made different assumptions, they might provide different best estimates of the effect even if their estimates would have been identical given the same assumption. Thus, incomplete specification could contribute to the observed variation in best estimates. At the extreme, the observed variation in best estimates could be simply "noise" attributable to incomplete specification. On the other hand, we would not expect incomplete specification to have an effect on the width of the

confidence interval, as distinct from its location, as it is likely that respondents answered the confidence interval question with their specifications of the question in mind.[23]

If incomplete specification results in greater variation in best estimates without affecting the width of the confidence intervals, the ratios in Table 8 will understate the true ratio of the width of confidence intervals to the variation in best estimates (assuming complete specification). Although we do not know the extent of the incomplete specification problem, the following calculation suggests that it would have to be extremely large to account for the low ratios in Table 8. Let X_{ij} represent respondent i's best estimate for question X. Suppose there are multiple ways of interpreting the question, denoted j. We can write: $X_{ij} = \mu + \epsilon_i + \delta_j$, where ϵ_i and δ_j represent person-specific and question-interpretation disturbances, and are assumed to be homoskedastic and independently distributed with mean 0. The population mean best estimate over all possible interpretations of the question is denoted μ. In this setup, the standard deviation of best estimates across all respondents is sqrt[$\sigma^2_\epsilon + \sigma^2_\delta$]. Incomplete specification implies that $\sigma^2_\delta > 0$. If the variance in best estimates due to variable interpretation equals half the variance in best estimates for a given question interpretation [$\sigma^2_\epsilon = \sigma^2_\delta$], the standard deviation of best estimates would be sqrt[2]sqrt[σ^2_ϵ], so the ratio of the confidence interval width to the standard deviation of best estimates would need to be inflated by sqrt[2]. Thus, a ratio of 2.0 would become 2.8, still well below the 3.92 benchmark for a normal. For the true ratio to equal 3.92, incomplete specification would have to account for approximately four-fifths of the observed variability in best estimates.

The results presented in Table 9 also suggest that more than incomplete specification is at work. The first row summarizes the coefficients of correlation across respondents between the absolute deviation of the best estimate from the median best estimate and the width of the confidence interval. The coefficient is significantly positive for more than two-thirds of the questions; the median coefficients are 0.43 for Labor Economics and 0.48 for Public Economics. The high correlations could arise if there were respondents who generally gave best estimates that are far from the median and who also generally gave wide confidence intervals. This explanation, however, is soundly rejected by the results shown in the second row of Table 9. These coefficients were obtained by correlating the absolute difference of the best estimate from the median best estimate with the width of the confidence interval for all possible combinations of

[23]If respondents' uncertainty over question interpretation leads to wider confidence intervals, then our measures will be biased against finding overconfidence.

questions except those reported in the first row (where both variables pertain to the same question). On average, there is no correlation when the questions are not the same, showing that the results in the first row are not attributable to some special heterogeneity among the respondents. The last two rows of Table 9 offer further confirmation for this conclusion. When the correlations are limited to pairs of questions that are similar (e.g., the Marshallian and Hicksian labor supply elasticities), a tendency toward positive coefficients similar to (but not as strong as) those in the first row can be seen.

Theoretically, the high correlations shown in the first row of Table 9 could result from some respondents giving a best estimate which they *know* is far from the predominant view and concomitantly providing a wide confidence interval to accommodate the predominant view. This explanation is not supported by the data. Logistic regressions of rejection of the median best estimates on the absolute difference from the median best estimate are highly significant. The median p value for the odds ratio in 20 equations is .005, and in only two equations is the p value > .05.

In summary, respondents tend to be overconfident about their estimates of economic parameters. However, they do tend to give wider confidence intervals when their best estimates are farther from the average best estimate.

Future research

The two surveys described in this paper reveal that both labor economists and public finance economists give widely disparate estimates of many important economic parameters such as elasticities of labor demand and labor supply. Because these parameters play key roles in governmental and private economic models, one challenge to economic research is to explain why empirical studies yield such varied results. In particular, we need a better understanding of how differences in research methods, data sources, and specification contribute to differences in expert opinion. Sustained attempts at reconciliation of diverse empirical results might achieve for other parameters what Lewis was able to accomplish for the union wage effect.

Another important finding is widespread overconfidence of economists in their estimates of economic parameters. Perhaps further research can explain why economists attach such strong priors to their own estimates, even when those estimates are far from the consensus in the survey literature.

Our study also reveals that economists hold widely disparate views about specific policy proposals in their specialties. Policy differences are explained, in part, by regressions that include

economic parameters, political party identification, and especially values, but much remains unexplained. This is particularly true for policy proposals in Public Economics. Future research should aim at discovering additional explanations for the policy differences. What is the role of differences in views about the translation of policy proposals into specific legislation and the implementation of that legislation? It is often said that "The Devil is in the details." Consider, for example, the policy regression for mandatory saving accounts, which had by far the lowest adjusted R^2. Perhaps the respondents had very different views of the details of a mandatory saving program, and these differences were not correlated with their values, political party identification, or estimates of economic parameters.

One issue that our questions did not address is the type of information that would lead economists to revise their views on policy proposals. Future surveys might therefore investigate whether respondents hold policy views that they describe as subject to modification based on new empirical findings, as well as the type of new findings that would lead to such revision.

One of the most important empirical results of this study is the strong correlation between policy positions and values, but an understanding of this relationship requires further research. The questions we have designated as "values" could also be described as "meta" or "non-specific" policy preferences. Where do these values or preferences come from? Many economists define a "value" as a well-specified objective function. But the question remains: Why do different economists prefer different functions? If most economists are consequentialists (Diamond 1997), differences in values could reflect differences in judgments about the consequences that flow from them. That is, there may be other kinds of positive questions embedded in the values questions. For instance, judgments about the effects of income redistribution on political harmony, crime, family stability, or investment in children could easily influence preferences about alternative income distributions.

In principle, a distinction can be made between means and ends, but in practice they might be difficult to distinguish because a particular end might be seen as a means to some other end. This issue can hardly be resolved within the scope of this paper, but it is worth emphasizing that the large policy differences we found among economists were much more closely related to their values than to their estimates of the economic parameters that are theoretically relevant to those policies. Differences in values lead economists to support different policies. However, contrary to "de gustibus non est disputandum," the research agenda should not stop there. We need to

identify other kinds of positive questions that might be influencing economists' values, and we need to find answers to those questions.

REFERENCES

Alston, Richard M.; Kearl, J. R. and Vaughan, Michael B. "Is There a Consensus Among Economists in the 1990's?" ***Amer. Econ. Rev.***, May 1992 ***(Papers and Proceedings)***, ***82***(2), pp. 203-9.

Atkinson, Alan and Stiglitz, Joseph. ***Lectures in public economics.*** New York: McGraw Hill, 1980.

Auerbach, Alan. Private correspondence to J. Poterba, February 24, 1997.

Auerbach, Alan J. and Slemrod, Joel. "The Economic Effects of the Tax Reform Act of 1986," ***J. Econ. Lit.***, 35(2), June 1997, pp. 589-632.

Auerbach, Alan and Kotlikoff, Lawrence. ***Dynamic fiscal policy.*** Cambridge: Cambridge University Press, 1987.

Barro, Robert. "Are Government Bonds Net Worth?" ***J. Political Economy***, 1974, ***82,*** pp. 1095-1117.

Brown, Charles; Gilroy, Curtis and Kohen, Andrew. "Time Series Evidence on the Effect of the Minimum Wage on Youth Employment and Unemployment," ***J. Human Resources,*** 1983, ***18***, pp. 3-31.

Burtless, Gary. "The Case for Randomized Field Trials in Economic and Policy Research," ***J. Econ. Perspectives,*** Spring 1995, ***9***(2), pp. 63-84.

Cummins, J.; Hassett, J. and Hubbard, R. J. "A Reconsideration of Investment Behavior Using Tax Reforms as Natural Experiments," ***Brookings Papers on Economic Activity,*** 1994, ***2***, pp. 1-59.

Dahl, C. "Gasoline Demand Survey," ***Energy J.,*** 1986, *7*, pp. 67-82.

Diamond, Peter A. "Rationing Medical Care--An Economist's Perspective," ***Economics and Philosophy***, forthcoming.

Engen, E.; Gale, W. and Scholz, J. "The Illusory Effects of Saving Incentives on Saving," ***J. Econ. Perspectives,*** Fall 1996, ***10***, pp. 113-38.

Feldstein, Martin. "Social Security, Induced Retirement, and Aggregate Capital Accumulation," ***J. Political Economy,*** 1974, pp. 905-26.

Freeman, Richard and Medoff, James. ***What do unions do?*** New York: Basic Books, Inc., 1984.

Friedman, B. and Warshawsky, M. "The Cost of Annuities: Implications for Saving Behavior and Bequests," ***Quarterly J. of Econ.,*** 1990, ***105,*** pp. 135-154.

Friedman, Milton. ***Essays in positive economics.*** Chicago: University of Chicago Press, 1953.

Fuchs, Victor R. and Reklis, Diane M. "Mathematical Achievement in Eighth Grade: Interstate and Racial Differences," NBER Working Paper 4784, 1994.

Fuchs, Victor R. "Economics, Values, and Health Care Reform," ***Amer. Econ. Rev.***, March 1996, ***86***(1), pp. 1-24.

Gordon, Danielle A. and Kammen, Daniel M. "Uncertainty and Overconfidence in Time Series Forecasts: Application to the Standard & Poor's 500 Stock Index," ***Appl. Fin. Econ.***, 1996, ***6***, pp. 189-98.

Gramlich, E. "Different Approaches for Dealing with Social Security," ***J. Econ. Perspectives,*** 1996, ***10***, pp. 55-66.

Hamermesh, Daniel. ***Labor demand***. Princeton, NJ: Princeton University Press, 1993.

Harberger, Arthur. "The Incidence of the Corporation Income Tax," ***J. Political Economy***, 1962, ***70***, pp. 215-40.

Hausman, J. "Taxes and Labor Supply," in Auerbach, Alan and Feldstein, Martin, eds., ***Handbook of public economics.*** Amsterdam: North Holland, 1985, pp. 213-65.

Heckman, James J. and Smith, Jeffrey. "Assessing the Case for Social Experiments," ***J. Econ. Perspectives,*** Spring 1995, ***9***(2), pp. 85-110.

Hirsch, Barry and Addison, John. ***The economic analysis of unions: New approaches and evidence***. Boston, MA: Allen and Unwin, 1986.

Hoxby, C. "Is There an Equity-Efficiency Trade-off in School Finance? Tiebout and a Theory of the Local Public Goods Producer," NBER Working Paper 5265, September 1995.

Killingsworth, Mark. ***Labor supply***. Cambridge, England: Cambridge University Press, 1983.

LaLonde, Robert. "The Promise of Public Sector-Sponsored Training Programs,"***J. Econ. Perspectives***, Spring 1995, ***9***(2), pp. 149-168.

Lewis, H. Gregg. ***Unionism and relative wages in the United States; an empirical inquiry***. Chicago: University of Chicago Press, 1963.

Lewis, H. Gregg. ***Union relative wage effects: a survey.*** Chicago: Univ. of Chicago Press, 1986.

Pencavel, John. "Labor Supply of Men: A Survey," in Ashenfelter, Orley and Layard, R. ***Handbook of labor economics, Vol. 1***. Amsterdam: North Holland, 1987, pp. 3-98.

Poterba, James. "Is the Gasoline Tax Regressive?" in Bradford, David (ed.), ***Tax Policy and the Economy***, Vol. 5. Cambridge, MA: MIT Press, 1991, pp. 145-164.

Poterba, James and Samwick, A. "Stock Ownership Patterns, Stock Market Fluctuations, and Consumption," ***Brookings Papers on Economic Activity***, 1995, ***2***, pp. 295-371.

Poterba, James; Venti, S. and Wise, David. "How Retirement Saving Programs Increase Saving," ***J. Econ. Perspectives***, Fall 1996, ***10***, pp. 81-113.

Rosen, H. ***Public finance***, 4th Ed. Chicago: Irwin Publishers, 1995.

Scott, Loren C. and Mitias, Peter M. "Trends in Rankings of Economics Departments in the U.S.: An Update," ***Econ. Inquiry***, April 1996, ***34***, pp. 378-400.

Shlyakhter, Alexander I. and Kammen, Daniel M. "Sea Level Rise or Fall?" ***Nature***, 7 May 1992, ***357***, p. 25.

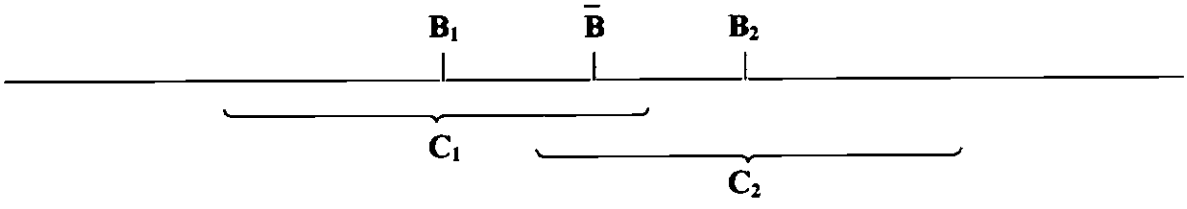
Shlyakhter, Alexander I.; Kammen, Daniel M.; Broido, Claire L. and Wilson, Richard. "Quantifying the Credibility of Energy Projections from Trends in Past Data," ***Energy Policy***, February 1994, pp. 119-30.

Slemrod, Joel. "Professional Opinions About Tax Policy: 1994 and 1934," ***Natl. Tax J.***, March 1995, ***48***, pp. 121-48.

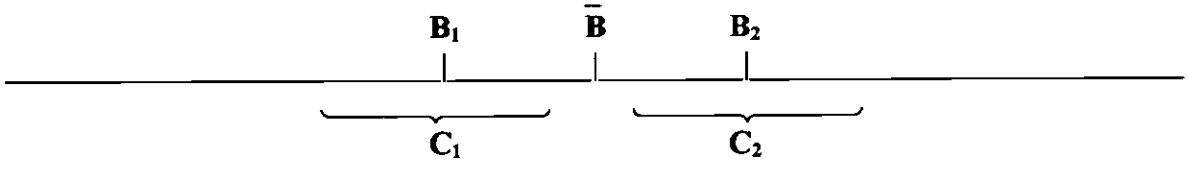
Weber, Max. ***The protestant ethic and the spirit of capitalism***. Charles Scribner and Sons, 1904, 1958.

Wellington, Allison. "Effects of the Minimum Wage on the Employment Status of Youths: An Update," ***J. of Human Resources***, 1991, ***26***, pp. 27-46.

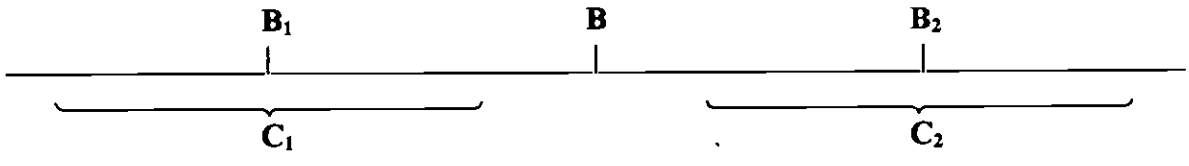
FIGURE 1. HYPOTHETICAL ILLUSTRATION OF "OVERCONFIDENCE" IN RESPONSES TO QUESTIONS ABOUT ECONOMIC PARAMETERS



Situation I: **NO "OVERCONFIDENCE"**



Situation II: **"OVERCONFIDENCE"**



Situation III: **"OVERCONFIDENCE"**

B = Best Estimate
C = Confidence Interval
1, 2 = Respondents 1 and 2

TABLE 1. SUMMARY OF RESPONSES TO POLICY QUESTIONS
(Labor Economics N=65; Public Economics N=69)

POLICY QUESTIONS							
	Mean	St Dev	Median	Interquartile Range			% NO+NA
LABOR ECONOMICS				25th	75th	75th - 25th	
1. Increase AFDC Benefits	39	28	40	10	56	46	3
2. Eliminate OASI Cap	68	25	70	50	89	39	6
3. Eliminate Affirmative Action	39	33	29	8	65	57	2
4. Increase Minimum Wage	53	30	50	37	76	39	2
5. Eliminate Job Training	38	30	37	10	61	51	2
6. Increase Unionization	46	27	48	24	65	41	11
Median		28.5				43.6	
PUBLIC ECONOMICS							
1. Increase AFDC Benefits	38	29	38	9	58	49	3
2. Increase Gasoline Tax	73	31	84	62	95	34	0
3. Adopt VAT	41	27	41	16	61	45	1
4. Eliminate OASI Cap	51	31	53	20	81	61	4
5. Expand IRAs	52	31	52	25	80	54	1
6. State Education Financing	56	29	61	36	81	45	0
7. Mandatory Savings Accounts	63	24	69	50	81	31	6
Median		29.3				45.0	

TABLE 2. SUMMARY OF BEST ESTIMATES OF ECONOMIC PARAMETERS
(Labor Economics N=65; Public Economics N=69)

ECONOMIC PARAMETERS							
	Mean	St Dev	Median	Interquartile Range			% NO+NA
LABOR ECONOMICS				25th	75th	75th - 25th	
7. Employer's Share of Payroll Tax	25.6	28.2	20.0	5.0	33.0	28.0	15
8. Total Labor Demand	-0.63	0.47	-0.50	-1.00	-0.30	0.70	17
9. Net Labor Demand	-0.42	0.39	-0.30	-0.50	-0.20	0.30	31
10. JTPA->Youth Earnings	3.9	6.0	2.0	0.0	6.0	6.0	12
11. JTPA->Male Earnings	3.6	4.6	2.0	0.0	5.0	5.0	12
12. JTPA->Female Earnings	7.0	5.5	7.0	2.0	10.0	8.0	12
13. % Δ Teen Employment	-2.1	4.1	-1.0	-3.0	0.0	3.0	3
14. Marshall (men) Supply	0.10	0.27	0.00	0.00	0.10	0.10	14
15. Marshall (women) Supply	0.45	0.57	0.30	0.10	0.70	0.60	15
16. Hicks (men) Supply	0.22	0.28	0.18	0.08	0.28	0.20	32
17. Hicks (women) Supply	0.59	0.44	0.43	0.20	0.80	0.60	35
18. % Union Wage Effect	13.1	4.1	15.0	10.0	15.0	5.0	6
19. % Productivity Effect	3.1	6.9	0.0	0.0	10.0	10.0	11
20. % M/F Discrimination	21.4	18.0	17.5	10.0	30.0	20.0	2
21. Prefer Structural Modeling Over Random Assignment	27	26	21	5	49	44	5
PUBLIC ECONOMICS							
8. % Δ Investment	11.7	10.7	10.0	5.0	15.0	10.0	35
9. Gas Demand (Hicks)	-0.53	0.39	-0.40	-0.70	-0.30	0.40	14
10. Wage Tax->Δ GDP Growth	0.35	0.49	0.20	0.01	0.50	0.49	16
11. Marshall (men) Supply	0.08	0.17	0.05	0.00	0.10	0.10	17
12. Hicks (men) Supply	0.26	0.26	0.20	0.10	0.30	0.20	23
13. % IRA->Net Savings	20.7	15.9	20.0	10.0	30.0	20.0	14
14. Current/Fair Annuity Price	1.36	0.39	1.30	1.20	1.50	0.30	35
15. % Δ Test Scores	0.18	5.83	0.00	-2.00	2.00	4.00	20
16. % Corporate Tax on Capital	41.3	29.2	40.0	20.0	65.0	45.0	16
17. Savings Rate w/o SS	8.2	2.7	8.0	6.0	10.0	4.0	13
18. Top 1% Wealth	35.5	18.5	30.0	20.0	50.0	30.0	3
19. PSS/SS Administrative Cost	2.61	2.67	1.50	1.00	3.00	2.00	22
20. 1986 Tax Change->% Δ GDP	2.03	3.60	1.00	0.20	3.00	2.80	30
21. 1993 Tax Change->% Δ GDP	0.46	2.81	0.00	-0.50	1.00	1.50	51

TABLE 3. SUMMARY OF RESPONSES TO VALUES AND POLITICAL PARTY IDENTIFICATION QUESTIONS
(Labor Economics N=65; Public Economics N=69)

VALUES QUESTIONS							
	Mean	St Dev	Median	Interquartile Range			% NO+NA
LABOR ECONOMICS				25th	75th	75th - 25th	
22. Increase Redistribution	56	23	56	50	68	18	0
23. Increase Lump Sum Redistribution	69	26	70	53	92	39	12
24. Efficiency > Equity	48	23	49	34	59	25	0
25. Social > Individual Responsibility	43	24	48	27	56	29	8
Median		23.7				27.3	
PUBLIC ECONOMICS							
22. Increase Redistribution	53	21	53	44	67	23	0
23. Increase Lump Sum Redistribution	71	19	74	60	84	24	1
24. Efficiency > Equity	55	24	57	37	72	35	9
25. Social > Individual Responsibility	41	22	37	26	54	28	16
Median		21.4				26.0	
POLITICAL PARTY IDENTIFICATION	**(%)**						
		DEM	REP	IND	OTH		% NO+NA
LABOR ECONOMICS		56	14	27	3		2
PUBLIC ECONOMICS		57	18	23	2		6

TABLE 4. SUMMARY OF COEFFICIENTS OF CORRELATION AMONG POLICY OPINIONS, BEST ESTIMATES OF ECONOMIC PARAMETERS, AND VALUES

LABOR ECONOMICS

CORRELATIONS BETWEEN:	Number of Coefficients	Median Coefficient[a]	Percent of Coefficients $p < 0.05$	Percent of Coefficients $p < 0.01$
Values and policy opinions	24	0.53	88	75
Values and economic parameters	56	0.18	30	16
Economic parameters and policy opinions	84	0.18	25	8
Theoretically related questions[b]	10	0.19	40	30

PUBLIC ECONOMICS

CORRELATIONS BETWEEN:	Number of Coefficients	Median Coefficient[a]	Percent of Coefficients $p < 0.05$	Percent of Coefficients $p < 0.01$
Values and policy opinions	28	0.35	79	64
Values and economic parameters	56	0.15	18	7
Economic parameters and policy opinions	98	0.13	10	5
Theoretically related questions[b]	18	0.15	28	17

a. Absolute values.

b. E.g., "Effect of higher minimum wage on teenage employment" and "Increase minimum wage" in the LE Survey. (See Tables 5 and 6 for full sets of theoretically related economic parameters and policy opinions.)

TABLE 5. LABOR ECONOMICS:
SUMMARY OF OLS REGRESSIONS OF POLICY OPINIONS

SPECIFICATIONS INCLUDING FULL SET OF CONTROL VARIABLES

POLICY POSITION	Economic Parameter Variable(s)	P-Value: Economic Parameters	P-Value: Values	P-Value: Party	Adj R^2	N
1. Increase AFDC Benefits	Q17	0.51	0.00	0.97	0.44	63
2. Eliminate OASI Cap	Q16,17	0.12	0.01	0.37	0.21	61
3. Eliminate Affirmative Action	Q20	0.02	0.03	0.69	0.36	64
4. Increase Minimum Wage	Q13	0.94	0.00	0.23	0.53	64
5. Eliminate Job Training	Q10,11,12	0.42	0.03	0.11	0.45	64
6. Increase Unionization	Q18,19	0.45	0.00	0.32	0.50	58
Median					**0.45**	

SEPARATE SPECIFICATIONS FOR EACH SET OF CONTROL VARIABLES

POLICY POSITION	Economic Parameter Variable(s)	Economic Parameters: P-Value	Economic Parameters: Adj R2	Values: P-Value	Values: Adj R^2	Party: P-Value	Party: Adj R^2	N
1. Increase AFDC Benefits	Q17	0.45	-0.01	0.00	0.47	0.00	0.24	63
2. Eliminate OASI Cap	Q16,17	0.14	0.03	0.00	0.18	0.34	0.01	61
3. Eliminate Affirmative Action	Q20	0.00	0.18	0.00	0.32	0.00	0.21	64
4. Increase Minimum Wage	Q13	0.21	0.01	0.00	0.53	0.00	0.36	64
5. Eliminate Job Training	Q10,11,12	0.05	0.08	0.00	0.40	0.00	0.37	64
6. Increase Unionization	Q18,19	0.04	0.07	0.00	0.50	0.00	0.33	58
Median			**0.05**		**0.44**		**0.29**	

NOTE: Missing observations of right-hand-side variables have been replaced by means.

TABLE 6. PUBLIC ECONOMICS:
SUMMARY OF OLS REGRESSIONS OF POLICY OPINIONS

SPECIFICATIONS INCLUDING FULL SET OF CONTROL VARIABLES

POLICY POSITION	Economic Parameter Variable(s)	P-Value: Economic Parameters	P-Value: Values	P-Value: Party	Adj R^2	N
1. Increase AFDC Benefits	Q12	0.30	0.00	0.14	0.49	67
2. Increase Gasoline Tax	Q9	0.35	0.02	0.69	0.20	69
3. Adopt VAT	Q8,10,12,16, 18,20,21	0.39	0.01	0.13	0.21	68
4. Eliminate OASI Cap	Q12	0.90	0.01	0.20	0.37	66
5. Expand IRAs	Q13,16,18,20	0.03	0.02	0.37	0.26	68
6. State Education Financing	Q15	0.00	0.72	0.88	0.18	69
7. Mandatory Savings Accounts	Q14,17,19	0.12	0.41	0.09	0.09	65
Median					0.21	

SEPARATE SPECIFICATIONS FOR EACH SET OF CONTROL VARIABLES

POLICY POSITION	Economic Parameter Variable(s)	Economic Parameters: P-Value	Economic Parameters: Adj R2	Values: P-Value	Values: Adj R^2	Party: P-Value	Party: Adj R^2	N
1. Increase AFDC Benefits	Q12	0.01	0.10	0.00	0.46	0.00	0.31	67
2. Increase Gasoline Tax	Q9	0.58	-0.01	0.00	0.22	0.03	0.09	69
3. Adopt VAT	Q8,10,12,16, 18,20,21	0.31	0.02	0.00	0.19	0.54	-0.01	68
4. Eliminate OASI Cap	Q12	0.15	0.02	0.00	0.36	0.00	0.26	66
5. Expand IRAs	Q13,16,18,20	0.01	0.13	0.00	0.17	0.03	0.09	68
6. State Education Financing	Q15	0.00	0.23	0.10	0.06	0.32	0.01	69
7. Mandatory Savings Accounts	Q14,17,19	0.13	0.04	0.59	-0.02	0.08	0.06	65
Median			0.04		0.19		0.09	

NOTE: Missing observations of right-hand-side variables have been replaced by means.

TABLE 7. PERCENT OF RESPONDENTS WHOSE CONFIDENCE INTERVALS DO NOT INCLUDE ALTERNATIVE BEST ESTIMATES OF ECONOMIC PARAMETERS

LABOR ECONOMICS

ECONOMIC PARAMETERS	N	Percent of Confidence Intervals That Do Not Include		
		Mean Best Estimate	Median Best Estimate	Most Accepted Value
7. Employer's Share of Payroll Tax	54	51.9	32.7	22.2
8. Total Labor Demand	53	47.2	30.2	30.2
9. Net Labor Demand	44	40.9	27.3	27.3
10. JTPA->Youth Earnings	54	18.5	18.2	9.3
11. JTPA->Male Earnings	54	27.8	18.2	14.8
12. JTPA->Female Earnings	55	38.2	36.4	18.2
13. % Δ Teen Employment	62	41.9	25.8	25.8
14. Marshall (men) Supply	52	26.9	17.3	17.3
15. Marshall (women) Supply	52	44.2	42.3	40.4
16. Hicks (men) Supply	43	41.9	39.5	18.6
17. Hicks (women) Supply	40	47.5	42.5	32.5
18. % Union Wage Effect	60	11.7	8.3	6.7
19. % Productivity Effect	57	33.3	19.3	19.3
20. % M/F Discrimination	62	50.0	45.2	27.4
Median		41.4	28.8	20.8

PUBLIC ECONOMICS

ECONOMIC PARAMETERS	N	Percent of Confidence Intervals That Do Not Include		
		Mean Best Estimate	Median Best Estimate	Most Accepted Value
8. % Δ Investment	44	36.4	22.7	22.7
9. Gas Demand (Hicks)	58	43.1	20.7	20.7
10. Wage Tax->Δ GDP Growth	56	41.1	25.0	23.2
11. Marshall (men) Supply	55	25.5	21.8	18.2
12. Hicks (men) Supply	52	30.8	21.2	21.2
13. % IRA->Net Savings	55	27.3	14.3	12.7
Median		33.6	21.5	20.9

TABLE 8. RATIOS OF AVERAGE WIDTHS OF CONFIDENCE INTERVALS TO STANDARD DEVIATION AND TO INTERQUARTILE RANGE OF BEST ESTIMATE

LABOR ECONOMICS

ECONOMIC PARAMETERS	N	MEAN CI / ST DEV			MEDIAN CI / IQ		
		mean width of ci	st dev of be	ratio	median width of ci	iq range of be	ratio
7. Employer's Share of Payroll Tax	54	33.4	28.2	1.18	30.0	28.0	1.07
8. Total Labor Demand	53	0.88	0.47	1.86	0.50	0.70	0.71
9. Net Labor Demand	44	0.54	0.39	1.37	0.40	0.30	1.33
10. JTPA->Youth Earnings	54	13.3	6.0	2.23	10.0	6.0	1.67
11. JTPA->Male Earnings	54	11.0	4.6	2.40	10.0	5.0	2.00
12. JTPA->Female Earnings	55	12.6	5.5	2.30	12.0	8.0	1.50
13. % Δ Teen Employment	62	5.9	4.1	1.47	4.0	3.0	1.33
14. Marshall (men) Supply	52	0.52	0.27	1.93	0.35	0.10	3.50
15. Marshall (women) Supply	52	0.80	0.57	1.41	0.60	0.60	1.00
16. Hicks (men) Supply	43	0.34	0.28	1.21	0.30	0.20	1.50
17. Hicks (women) Supply	40	0.71	0.44	1.62	0.55	0.60	0.92
18. % Union Wage Effect	60	15.7	4.1	3.79	15.0	5.0	3.00
19. % Productivity Effect	57	18.8	6.9	2.74	15.0	10.0	1.50
20. % M/F Discrimination	62	31.8	18.0	1.77	30.0	20.0	1.50
Median				**1.82**			**1.50**

PUBLIC ECONOMICS

ECONOMIC PARAMETERS	N	MEAN CI / ST DEV			MEDIAN CI / IQ		
		mean width of ci	st dev of be	ratio	median width of ci	iq range of be	ratio
8. % Δ Investment	44	24.7	10.7	2.31	20.0	10.0	2.00
9. Gas Demand (Hicks)	58	0.74	0.39	1.89	0.60	0.40	1.50
10. Wage Tax–>Δ GDP Growth	56	1.11	0.49	2.25	0.65	0.49	1.33
11. Marshall (men) Supply	55	0.52	0.17	3.03	0.35	0.10	3.50
12. Hicks (men) Supply	52	0.44	0.26	1.73	0.40	0.20	2.00
13. % IRA–>Net Savings	55	44.3	15.9	2.78	40.0	20.0	2.00
Median				**2.28**			**2.00**

TABLE 9. SUMMARY OF COEFFICIENTS OF CORRELATION BETWEEN WIDTH OF CONFIDENCE INTERVAL AND ABSOLUTE DIFFERENCE OF BEST ESTIMATE FROM MEDIAN BEST ESTIMATE OF ECONOMIC PARAMETERS

LABOR ECONOMICS				
CORRELATIONS BETWEEN:	Number of Coefficients	Median Coefficient	Percent of Coefficients[a] $p < 0.05$	$p < 0.01$
The same question	14	0.43	64	64
Not the same question	182	-0.01	14	8
Dissimilar	160	-0.03	8	3
Similar[b]	22	0.35	59	50

PUBLIC ECONOMICS				
CORRELATIONS BETWEEN:	Number of Coefficients	Median Coefficient	Percent of Coefficients[a] $p < 0.05$	$p < 0.01$
The same question	6	0.48	83	83
Not the same question	30	0.08	20	13
Dissimilar	28	0.06	18	14
Similar[b]	2	0.28	50	0

a. Coefficients that are positive and significant as percent of all coefficients.

b. E.g., the Marshallian and Hicksian elasticities of labor supply.

APPENDIX

Labor Economics Survey

Victor R. Fuchs

Alan B. Krueger

204 Junipero Serra Boulevard
Stanford, California 94305

415-326-7639
Fax 328-4163

July 3, 1996

We are inviting a selected group of economists at the leading American research universities to cooperate in an ongoing study. Our goal is to get a better understanding of the relationships among positive and normative economic research and public policy.

To that end, we ask you to please complete the attached survey and return it in the enclosed envelope at your earliest convenience. Your replies will be strictly anonymous to us and to our research assistants; the form is coded solely to allow our secretary to send a reminder to anyone who has not returned the survey within a few weeks.

In your replies, assume that the question refers to the U.S. in 1996. If you wish to qualify a reply, please jot your comment on the back of the page.

Your assistance is greatly appreciated. We will send you the preliminary results when they are tabulated.

Sincerely,

Victor R. Fuchs

Alan B. Krueger

Identical letter sent with the Public Economics Survey signed by Victor Fuchs and James Poterba.

Enclosures: Survey
Return envelope

July 3, 1996

LABOR ECONOMICS SURVEY

Questions 1 through 6: Please indicate your opinion of each of the following policy proposals by placing a vertical mark on the corresponding horizontal line.

Note that we intend to use a continuous scale.

		No opinion
1. Increase AFDC benefits financed by a revenue-neutral, proportional increase in all marginal income tax rates.	**strongly oppose** ——— **strongly favor**	____
2. Eliminate the current cap on taxable wages under the OASI payroll tax, offset by a revenue-neutral reduction of the payroll tax rate.	**strongly oppose** ——— **strongly favor**	____
3. Eliminate the OFCCP Affirmative Action program (i.e., eliminate Executive Order 11246).	**strongly oppose** ——— **strongly favor**	____
4. Increase the minimum wage from $4.25 to $5.15 per hour over two years.	**strongly oppose** ——— **strongly favor**	____
5. Eliminate the federal role in job training, with the cost savings applied to deficit reduction. Most significantly, this proposal will eliminate the JTPA program, which at $4 billion per year, is the largest federal job training program.	**strongly oppose** ——— **strongly favor**	____
6. Change the labor laws to permit workers to form a union if a majority of workers in the bargaining unit signs cards (in a reasonable period of time) saying they want a particular union.	**strongly oppose** ——— **strongly favor**	____

Questions 7-20: Please give your best estimate of a quantity (x), along with your best estimate of the 95% confidence interval for x. This confidence interval is defined as $[x_1,x_2]$, such that $Pr(x < x_1) = Pr(x > x_2) = .025$. The confidence intervals need not be symmetric; one could report, for example, a best estimate of .50, with a confidence interval of [.35, 1.6].

Be sure to indicate a minus sign if your estimate is a negative quantity.

	Best estimate	**Lower bound**	**Upper bound**	**No opinion**
7. The percentage of payroll taxes that is borne by employers in the long run.	_____	_____	_____	____
8. The total wage elasticity of labor demand.	_____	_____	_____	____
9. The output-constant wage elasticity of labor demand.	_____	_____	_____	____
10. The percentage impact on annual earnings for the average disadvantaged ***youth*** who undergoes JTPA job training.	_____	_____	_____	____
11. The percentage impact on annual earnings for the average ***adult male*** who undergoes JTPA job training.	_____	_____	_____	____
12. The percentage impact on annual earnings for the average ***adult female*** who undergoes JTPA job training.	_____	_____	_____	____
13. The percentage change in employment of teenagers caused by a 10 percent increase in the minimum wage.	_____	_____	_____	____

Questions 7 through 20, continued.

Be sure to indicate a minus sign if your estimate is a negative quantity.

	Best estimate	Lower bound	Upper bound	No opinion
14. The uncompensated (i.e., Marshallian) elasticity of labor supply for men ages 25-54.	_____	_____	_____	____
15. The uncompensated (i.e., Marshallian) elasticity of labor supply for women ages 25-54.	_____	_____	_____	____
16. The compensated (i.e., Hicksian) elasticity of labor supply for men ages 25-54.	_____	_____	_____	____
17. The compensated (i.e., Hicksian) elasticity of labor supply for women ages 25-54.	_____	_____	_____	____
18. The percentage impact of unions on the earnings of their average member.	_____	_____	_____	____
19. The percentage impact of unions on productivity of unionized companies.	_____	_____	_____	____
20. The percentage of the male-female wage gap attributable to employer discrimination.	_____	_____	_____	____

Questions 21 through 25: Please indicate your opinion by placing a vertical mark on the corresponding horizontal line.

Note that we intend to use a continuous scale.

No opinion

21. To understand the effects of job training, I would give more credence to results coming from studies that employ:

randomized assignment — **structural modeling** ____

22. Compared with the present, the federal government's role in income redistribution should be:

much less — **much greater** ____

23. Same as question 22, but assume that the redistribution could be accomplished with transfers that have no price effects (i.e., with lump sum taxes and transfers that have no distortionary effects):

much less — **much greater** ____

24. When public policy must choose between equity and efficiency, it should give more weight than it now does to:

equity — **efficiency** ____

25. When public policy must choose between individual and social responsibility, it should give more weight than it does now to:

individual responsibility — **social responsibility** ____

26. Please circle the best description of your **political party identification.**

Democrat **Republican** **Independent** **Other** ____

7/3/96

PUBLIC ECONOMICS SURVEY

Questions 1 through 7: Please indicate your opinion of each of the following policy proposals by placing a vertical mark on the corresponding horizontal line.
Note that we intend to use a continuous scale.

		No opinion
1. Increase AFDC benefits financed by a revenue-neutral, proportional increase in all marginal income tax rates.	strongly oppose — strongly favor	___
2. Increase the federal gasoline excise tax by 25 cents per gallon, with proceeds devoted to general revenues.	strongly oppose — strongly favor	___
3. Replace the current federal taxes on personal income, corporate income, and estates with a revenue-neutral value-added tax.	strongly oppose — strongly favor	___
4. Eliminate the current cap on taxable wages under the OASI payroll tax offset by a revenue-neutral reduction of the payroll tax rate.	strongly oppose — strongly favor	___
5. Raise the maximum annual IRA contribution to $5,000 and restore "up front" tax deductibility of IRA contributions for all taxpayers regardless of income level.	strongly oppose — strongly favor	___
6. Move toward greater reliance than at present on state-level as opposed to local-level financing of public education.	strongly oppose — strongly favor	___
7. Replace part of the current payroll tax with a mandatory saving program in which proceeds are invested in individual-directed investment accounts and annuitized at retirement (the "middle road" plan recently discussed by the Advisory Panel on Social Security).	strongly oppose — strongly favor	___

Questions 8 through 13: Please give your best estimate of a quantity (x), along with your best estimate of the 95% confidence interval for x. This confidence interval is defined as $[x_1, x_2]$ such that $Pr(x < x_1) = Pr(x > x_2) = .025$. The confidence intervals need not be symmetric; one could report, for example, a best estimate of .50, with a confidence interval of [.35, 1.6].

Be sure to indicate a minus sign if your estimate is a negative quantity.

	Best estimate	Lower bound	Upper bound	No opinion
8. The percentage increase or decrease in investment in plant and equipment over the next five years that would result from a permanent change in the corporate income tax law to allow expensing of all capital investment, financed by a higher corporate income tax rate.	_____	_____	_____	_____
9. The compensated (i.e., Hicksian) price elasticity of demand for gasoline in the United States over a horizon of two to five years.	_____	_____	_____	_____
10. The percentage point change in the average GDP growth rate over the next ten years if all capital income taxes in the United States were replaced by a revenue-neutral wage tax.	_____	_____	_____	_____
11. The uncompensated (i.e., Marshallian) elasticity of labor supply for men ages 25-54.	_____	_____	_____	_____
12. The compensated (i.e., Hicksian) elasticity of labor supply for men ages 25-54.	_____	_____	_____	_____
13. The percentage of the inflows to IRA's during the 1981-1986 period that represented net additions to national saving.	_____	_____	_____	_____

Questions 14 through 21: Please give your best estimate or guess.

Be sure to indicate a minus sign if your estimate is a negative quantity.

	Best estimate	No opinion
14. The ratio of the current market price of purchasing an immediate life annuity at age 65 to the actuarially fair price of such an annuity.	_____	_____
15. The percentage change in average student test scores that would follow from a shift from the present state/local responsibility for financing public education to a system in which all funds were from the state.	_____	_____
16. The percentage of the current corporate income tax in the United States that is ultimately borne by capital.	_____	_____
17. The average U.S. personal saving rate between 1990 and 1994, if Social Security had never been enacted. For reference, the actual personal saving rate in the National Income and Product Accounts averaged 5.0 percent of disposable income.	_____	_____
18. The fraction of household net worth held by households in the top 1% of the net worth distribution.	_____	_____
19. The ratio of the administrative costs of a system of private, mandatory retirement saving accounts to the administrative costs of the current Social Security System.	_____	_____
The percentage change in steady-state GDP that would have been associated with each of the following tax reforms, if they had been allowed to remain in force until the economy reached a new steady state:		
20. 1986 Tax Reform Act	_____	_____
21. 1993 Budget Enforcement Act	_____	_____

Questions 22 through 25: Please indicate your opinion by placing a vertical mark on the corresponding horizontal line.

Note that we intend to use a continuous scale.

No opinion

22. Compared with the present, the federal government's role in income redistribution should be:

much less — much greater ____

23. Same as question 22, but assume that the redistribution could be accomplished with transfers that have no price effects (i.e., assuming lump sum taxes and transfers that have no distortionary effects):

much less — much greater ____

24. When public policy must choose between equity and efficiency, it should give more weight than it now does to:

equity — efficiency ____

25. When public policy must choose between individual responsibility and social responsibility, it should give more weight than it now does to:

individual responsibility — social responsibility ____

26. Please circle the best description of your **political party identification.**

Democrat **Republican** **Independent** **Other** _____