# A Preliminary Analysis of the ANES 2006 Pilot Study Responses to Questions on Progressivity of Taxes and Estate Tax

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We proposed a large number of questions to investigate voters' views regarding the progressivity of taxation in the United States and the desirability of abolishing/eliminating the estate tax. Modified versions of four questions were included in the pilot study.

**Mod 24_1**. This next question is about the percent of people's income that they should pay in taxes to the federal government. Which one of the following opinions best agrees with your view? You can just tell me the number of the opinion you choose.

One: People who make more money should pay a larger percent of their income in taxes to the government than people who make less money.

Two: people who make more money should pay a smaller percent of their income in taxes to the government than people who make less money.

Three: the amount of money people make should not determine what percent of their income they pay in taxes.

**Mod 24_2**. Do you think that big companies should pay a LARGER percent of their profits in taxes than small businesses do, that big companies should pay a SMALLER percent of their profits in taxes than small businesses do, or that big companies and small businesses should pay the SAME percent of their profits in taxes?

1. Larger
2. Smaller
3. The same

**Mod 24_A3**. When a person dies and leaves money to someone else, do you think the federal government should require that some of this money be paid in taxes, or that the federal government should not do this?

1. Should
2. Should not.

**Mod 24_A4** (if answered "Should" above). Do you think that a bigger percent of the money should be paid in taxes when the person who died left more money, that a smaller percent should be paid in taxes when the person who died left more money, or that the same percent should be paid in taxes no matter how much the person left?

1. Larger percent
2. Smaller percent

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3. The same percent

**Mod24_B3** (alternative to 24_A1). There has been a lot of talk recently about doing away with the tax on large inheritances, the so-called estate tax. Do you favor or oppose doing away with the estate tax?

1. Favor doing away with tax
2. Oppose doing away with tax

### *1. Motivation*

In economically industrialized and politically democratic countries, taxes and public expenditures are important forces modifying the distribution of disposable income. There is considerable variation in the extent of redistribution through the fiscal system, with the amount of redistribution in the United States being smaller than in many European countries, yet still substantial. Differences over the extent to which the highest income households and businesses should be taxed have been prominent among the distinctions between the Democratic and Republic parties during the last three decades. We hope that answers to our questions and their correlations with other items in ANES surveys will help to shed light on the nature and strength of support for redistribution through the tax system and on the extent of concern about income and wealth inequalities. In this preliminary report, we first describe the data and its correlations with major categories of interest to us, then conduct a first investigation of a major question of theoretical interest—how much do economic self-interest and ideology or values, respectively, shape preferences on tax progressivity. We conclude with a preliminary analysis of similarities and differences between the new data and related items in the ANES 2004 survey.

### *2. Description and basic correlations*

A total of 665 respondents were asked questions 24_1 and 24_2. 316 respondents were asked 24_A3, of whom 33 went on to answer 24_A4. 349 respondents answered question 24_B3. We analyze their responses in concert with information about the same respondents which was given in the 2006 Pilot Study and in the 2004 Panel Survey.

Table 1 gives the proportions of the respondents' answers by category, including a breakdown by gender and income. "Don't know" and "refused" are left out, so numbers in each category don't sum to 100%. However, few respondents chose those categories,

which indicates that the questions were not found difficult by most. We comment first on these basic results, then move to more detailed analysis of a few issues.

| **Table 1, Part 1** | | Overall | Female | Male | Low Income[1] | High Income[2] |
|---|---|---|---|---|---|---|
| Q. 24_1: Tax Progressively? | Progressive | 58.50% | 60.56% | 56.07% | 59.80% | 57.28% |
| | Regressive | 2.26% | 2.22% | 2.30% | 3.52% | 0.00% |
| | Same | 39.10% | 37.22% | 41.31% | 36.68% | 42.23% |
| Q. 24_2: Tax big business at: | Higher rate | 56.09% | 60.00% | 51.48% | 64.32% | 50.97% |
| | Lower rate | 0.60% | 1.11% | 0.00% | 0.50% | 0.00% |
| | Same rate | 42.71% | 38.61% | 47.54% | 34.67% | 48.06% |
| Q. 24_A3: Tax bequests? | Yes | 10.44% | 9.36% | 11.72% | 10.31% | 8.00% |
| | No | 88.92% | 89.47% | 88.28% | 87.63% | 92.00% |
| Q. 24_A4: Leave more, taxed at? | Higher rate | 54.55% | 62.50% | 47.06% | 60.00% | 50.00% |
| | Lower rate | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Same rate | 45.45% | 37.50% | 52.94% | 40.00% | 50.00% |
| Q. 24_B3: Abolish Estate Tax? | Favor | 70.20% | 74.07% | 65.63% | 70.59% | 66.98% |
| | Oppose | 27.79% | 23.81% | 32.50% | 27.45% | 30.19% |

[1] Respondent's self-reported income between $0 and $ 19,999 (199 individuals)
[2] Respondent's self-reported income above $45,000 (206 individuals)

Note: analogous results are obtained when using respondent's household income both as reported by the interviewee and as estimated by the interviewer.

First, the overall result on income tax progressivity (24_1) is in line with our expectations, with a strong majority favoring progressive rates, a substantial minority favoring equal rates, and a much smaller number favoring regressive rates. We investigate below how well individual preferences are explained by income and ideology. We see already a gender gap, with more women favoring progressive taxes, and a small difference by income consistent with a role for economic self-interest.

The second question (24_2) has less direct operational relevance than the others, since applying different tax rates to businesses of different sizes is not an idea under serious political discussion. Although there are some policies that offer special assistance to small businesses, as well as some less visible policies that may disproportionately help

large businesses, we see the question mainly as a barometer of sentiment toward businesses of different size, suggestive of views about the "legitimacy" of the profits earned by large corporations or about the ability of businesses to pay taxes. The answers show relative sympathy for small businesses and either dislike of big businesses, or a belief that "it can afford to pay more." There is again a gender gap and higher-income respondents are less inclined to tax corporations than are those with lower incomes. It's likely that many respondents have little understanding of the problem of tax incidence (that business taxes may be passed on to consumers) or of the kinds of efficiency concerns that differentially taxing businesses raise in economists' minds. Table 1, Part 2 shows that more educated respondents are a little less likely than less educated ones are to favor imposing higher taxes on big businesses, but the pair wise correlation coefficient between education and the corporate tax measure shown in Table 2 is not significant.

| **Table 1, Part 2** | | Republican[1] | Democrat[2] | Low Education[3] | High Education[4] | Life Fair[5] | Life Not Fair[6] |
|---|---|---|---|---|---|---|---|
| Q. 24_1: Tax Progressively? | Progressive | 45.54% | 70.52% | 58.33% | 71.71% | 54.75% | 54.95% |
| | Regressive | 2.82% | 2.24% | 3.43% | 1.97% | 3.17% | 2.75% |
| | Same | 51.17% | 27.24% | 38.24% | 26.66% | 42.08% | 42.31% |
| Q. 24_2: Tax big business at: | Higher rate | 48.36% | 65.67% | 61.76% | 56.68% | 48.87% | 57.69% |
| | Lower rate | 0.00% | 0.75% | 1.47% | 0.00% | 0.45% | 1.10% |
| | Same rate | 51.64% | 33.58% | 36.76% | 41.45% | 50.68% | 39.56% |
| Q. 24_A3: Tax bequests? | Yes | 5.21% | 16.30% | 6.06% | 15.28% | 9.09% | 11.00% |
| | No | 94.79% | 82.96% | 91.92% | 84.72% | 90.00% | 89.00% |
| Q. 24_A4: Leave more taxed at? | Higher rate | 40.00% | 63.64% | 33.33% | 63.64% | 30.00% | 72.73% |
| | Lower rate | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Same rate | 60.00% | 36.36% | 66.67% | 36.36% | 70.00% | 27.27% |
| Q. 24_B3: Abolish Estate Tax? | Favor | 84.62% | 60.15% | 80.00% | 52.50% | 77.48% | 68.29% |
| | Oppose | 14.53% | 38.35% | 19.05% | 43.75% | 19.82% | 30.49% |

[1] Respondent's party self-identification: Strong Republican or Weak Republican (213 individuals)
[2] Respondent's party self-identification: Strong Democrat or Weak Democrat (268 individuals)
[3] Respondents with 12th grade or less (160 individuals)
[4] Respondents with four year college or more (152 individuals)
[5] Respondents who answered: people get what they deserve in life always or most of the times (221 individuals)
[6] Respondents who answered: people get what they deserve in life once in a while or never (182 individuals)

| **Table 2. Pair wise correlations** | Progressivity[a] | Corporate Tax[b] | Bequest Tax[c] | Progressivity in Bequest Tax[d] | Eliminate estate Tax[e] |
|---|---|---|---|---|---|
| Income[1] | 0.0518 | -0.0549 | -0.0750 | 0.0144 | 0.0170 |
| Self-reported Socio-economic Class[2] | 0.0170 | -0.0535 | 0.0295 | 0.3771** | 0.0213 |
| Gender (M=1, F=2) | 0.0190 | 0.0256 | 0.0482 | 0.1550 | -0.0304 |
| Political Self-Identification[3] | -0.1698*** | -0.1081** | -0.2219*** | -0.1747 | -0.1942*** |
| Party Self-Identification[4] | -0.1801*** | -0.1002** | -0.1140** | -0.2043 | -0.1189** |
| Importance of Equality[5] | -0.1610*** | -0.1359** | 0.0020 | -0.4596* | -0.1197 |
| Belief in Just World[6] | 0.0344 | 0.1305*** | -0.0737 | 0.3731** | 0.0104 |
| Education[7] | 0.0710* | 0.0118 | -0.1440** | 0.3622** | 0.1195** |

* Significant at 10%; ** significant at 5%; *** significant at 1%

a Answers reordered as follows: 1 = regressive, 2 = proportional, 3 = progressive.

b Answers reordered as follows: 1 = big should pay less, 2 = should pay same, 3 = should pay more.

c Answers ordered as: 1 = no tax, 2 = tax.

d Answers ordered as: 1 = lower rate, 2 = same rate, 3 = higher rate

e Answers ordered as: 1 = favor abolition, 2 = oppose abolition.

[1] Respondent's self-reported income (23 valid categories, from “None or less than $2,999” to “$120,000 and over”).

[2] Respondent's subjective social class [“Lower class”(0), “Average working class” (1), “Working class” (2), “Upper working class” 3), “Average middle class” (4), “Middle class” (5), “Upper middle class” (6), “Upper class” (7)].

[3] Respondent's political self-placement [“Extremely liberal” (1), “Liberal” (2), “Slightly liberal” (3), “Moderate, middle of the road” (4), “Slightly conservative” (5), “Conservative” (6), “Extremely conservative” (7)].

[4] Respondent's party identification ["Strong Democrat" (0), "Weak Democrat" (1), "Independent-Democrat" (2), Independent-Independent (3), Independent-Republican (4), Weak Republican (5), Strong Republican (6)]

[5] Answer to the question: "First, [he/she] thinks it is important that every person in the world be treated equally. [He/She] believes everyone should have equal opportunities in life. Is this person very much like you, like you, somewhat like you, a little like you, not like you, or not like you at all? [valid answers: "Very much like you" (1), "Like you" (2), "Somewhat like you" (3), "A little like you" (4), "Not like you" (5), "Not like you at all" (6)].

[6] Answer to the question: "How much of the time do people get what they deserve in life? [valid answers: "Always" (1), "Most of the time" (2), "About half the time" (3), "Once in a while (4), "Never" (5)].

[7] Highest grade of school or year of college completed by the respondent (14 valid answers, from "4th grade" to "17 or more grades").

The answers regarding taxing of bequests are somewhat surprising to us. Past poll results vary quite widely, with pro-repeal groups arguing that large majorities favor the elimination of all estate taxes while anti-repeal groups claim the opposite. According to The Tax Foundation (www.taxfoundation.org), a pro-repeal group, respondents were asked "Do you personally favor or oppose completely eliminating the estate tax—that is, the tax on property left by people who die?" 68% answered in favor in both 2005 and 2006. 19% answered oppose in 2006, 17% in 2005. A July 2005 article in the National Review Online says that an August 2000 Pew Research Center poll found that 71 percent of Americans support the elimination of the inheritance tax — 28 percent saying they favored the idea and another 43 percent saying they strongly favored it – and that a *New York Times* poll in March 2005 found that 76 percent of people say they oppose any tax on inherited assets.[1] In contrast, the anti-repeal group "Responsible Wealth" claimed in April 2006 that "A new national poll shows that 57% prefer keeping the tax as it is or reforming it. Only 23% favor repealing the tax." The responses to our questions are more in line with those reported by the pro-repeal groups. They leave little doubt that most Americans' initial reaction to the idea of taxing bequests is negative. However, in line with the enormous variance in results just reported, the way people respond to questions about estate taxes is sensitive to the way in which questions are worded. In the Pilot Study responses themselves, only 10.4% of respondents to question 24_A3 think the money people leave at their death should be subject to taxation. However, this question

[1] Bruce Bartlett, "Death Tax at Death's Door?" *National Review Online*, July 20, 2005.

makes no reference to the fact that such taxes have ever existed. The variant in question 24_B3 receives almost three times as high a share opposing repeal of estate taxes, although that 27.8% is still dwarfed by those favoring repeal. As with the other questions, here too there's a gender gap, with females more supportive of the tax, perhaps because more of them recognize and approve of its potential to reduce wealth inequality. More educated respondents are also more supportive of bequest taxes, with almost 44% of those with post-college education opposing their repeal. The correlation between education and income may help to explain the otherwise anomalous finding (Table 1, Part 1) that higher income individuals are a little more likely to oppose repeal (the income correlation with views on repeal is itself insignificant according to Table 2).

### *3. Self-interest versus fairness, social preferences or ideology*

As with the set of experimental studies of preferences for redistribution of income that we are currently analyzing,[2] a major motivation for our interest in the questions in the pilot study is that we want to understand the relative importance of self-interest versus social preferences, moral beliefs, or ideology, in explaining the degree of progressivity observed in actual tax systems. Tax-payers have direct financial interest in the degree of progressivity: all whose incomes are below the arithmetic average benefit when rates rise with income, while those in the highest income categories pay more taxes when rates rise with income. Although the point of transition between those aided and those hurt by more progressive taxes depends on the exact tax structure and the distribution of income, the fact that mean income is substantially above median income in all industrial societies including the U.S. means that there is always a substantial majority benefited by a progressive structure. In fact, the majority could reduce their immediate tax burden even today by lowering their own rates and raising the rates for those with higher incomes still further, so that the moderateness of observed progressivity is more of a puzzle than is progressivity itself, from the standpoint of self-interest explanations. The degree of support for progressivity by some of the higher-income respondents in our survey, as seen in Table 1, is also a puzzle from the standpoint of self-interest.

[2] Durante and Putterman (in process).

The most important additional factors at work are those in the categories of (a) differential political participation, (b) cognitive errors, (c) beliefs regarding indirect causes, and (d) social preferences, moral beliefs and ideology. To elaborate: (a) Because individuals with lower incomes vote less often, the income of the actual median voter is above that of the person with median income, lowering predicted progressivity. (b) Less understanding of the tax system on the parts of those with lower incomes could explain less effectively self-interested voting by those individuals. (c) Voters may believe that the short-run benefit to them of a more progressive tax structure will be offset by negative economic effects, for instance on investment, that would harm them in the medium to long run. (d) Finally, low income earners may have social preferences or ideological beliefs that counter their financial interests. For example, low income earners may believe that many high income earners deserve their earnings by virtue of superior effort or intelligence, and may think it unfair to tax them too heavily. The divergence of tax preference from self-interest can also go the other way, with high income earners favoring progressive taxes for reasons of fairness. Indeed, it is logically possible that no voter considers self-interest, and that the observed levels of tax-progressivity are fully explained by a trade-off between (i) ideals of fairness shared by the entire electorate, and (ii) estimates of the negative incentive effects of taxation that the electorate also shares.

In conjunction with other questions in the Pilot Study and questions in the 2004 Panel Survey, we can investigate aspects of all of the above factors except (c).[3] According to Table 1, Part 2, respondents who identified themselves as Democrats are far more likely to favor progressive taxes (in Q24_1) and far less likely to favor equal, proportionate taxes than are those identifying themselves as Republican. The "Party Self-Identification" cell of the first column of Table 2 shows that this correlation between party and response on tax progressivity is significant at the 1% level. The cell above it shows a similarly significant correlation between answers to Q24_1 and self-identification as more liberal as opposed to more conservative (see the table note for the full set of options for the political self-identification measure). Columns 2, 3 and 5 show that both self-identification measures are significantly correlated also with views about

[3] We proposed questions relevant to hypothesis c) but these were not included in the Pilot Study.

taxation of big versus small business and bequest taxes, always in the expected directions.

Table 2 also shows the influence of ideology on views of tax progressivity for the item referred to as "importance of equality," which represents answers to the question of whether someone who "thinks it is important that every person in the world be treated equally" is "very much like you," "like you," etc. Those identifying themselves with such an individual are more likely to favor progressive taxes, significant at the 1% level. They are also more likely to favor heavier taxes on bigger businesses and progressivity in the taxing of inheritances, although the significance levels decline for these items. Interestingly, the "belief in a just world" measure derived from the theory of redistributive preferences proposed by Benabou and Tirole (see also Piketty, 1995) has correlations of predicted sign, but significant only for taxing big business and progressivity of inheritance taxes.

Turning to differential political participation, Table 3 shows correlations among variables of interest in the respondents answer to the question "During the past 6 years, did you usually vote in national, state, and local elections, or did you usually NOT vote?" which we label Turnout. The variable orders the answers so that a lower value indicates higher election participation. As anticipated, based on past studies, the table shows that respondents with higher income, higher self-assessed socio-economic class and higher education voted more often, the three correlations being large and highly significant. There are weaker correlations with party and political identification, indicating that more conservative and more Republic voters voted more often. While answers to the question about importance of equality are uncorrelated with turnout, those with a stronger belief in a just world turn out more, implying that those who think the world unfair and who (according to Benabou and Tirole's theory) are more likely to favor redistribution are less likely to vote. Turning to the correlations between turnout and our Pilot Study questions, however, none of these turn out to be statistically significant. Overall, then, the data provide only weak support for the proposition that the level of redistribution in the United States may be lower because of lower electoral participation by those likely to favor redistribution.

| **Table 3 Correlations** | Income | Socio-ec. Class | Gender | Political Self-ID |
|---|---|---|---|---|
| Income | 1 | --- | --- | --- |
| Socio-ec. Class | 0.2717*** | 1 | --- | --- |
| Gender | -0.3206*** | -0.0427 | 1 | --- |
| Political Self-ID | 0.0229 | 0.1031** | -0.0162 | 1 |
| Party Self-ID | 0.0601 | 0.1648*** | -0.1058*** | 0.6455*** |
| Importance of Equality | 0.1165** | 0.0411 | 0.0005 | 0.1638*** |
| Belief in a Just World | -0.096** | -0.1226*** | 0.0284 | -0.1027** |
| Education | 0.3976*** | 0.4108*** | -0.0746* | -0.0426 |
| Turnout[1] | -0.2229*** | -0.3078*** | -0.0083 | -0.1143* |

| **Table 3, cont.** | Party Self-ID | Importance of Equality | Belief in a Just World | Education |
|---|---|---|---|---|
| Income | --- | --- | --- | --- |
| Socio-ec. Class | --- | --- | --- | --- |
| Gender | --- | --- | --- | --- |
| Political Self-ID | --- | --- | --- | --- |
| Party Self-ID | 1 | --- | --- | --- |
| Importance of Equality | 0.1810*** | 1 | --- | --- |
| Belief in a Just World | -0.0668* | 0.0396 | 1 | --- |
| Education | 0.0435 | 0.0167 | -0.077** | 1 |
| Turnout[1] | -0.1129** | 0.0334 | 0.1481*** | -0.2265*** |

Significant at 10%; ** significant at 5%; *** significant at 1%

[1] Respondent's answer to the following question: “During the past 6 years, did you usually vote in national, state, and local elections, or did you usually NOT vote? [valid answers: “Usually vote” (1); “Usually not vote” (2)]

With respect to the cognitive error hypothesis, a crude approach to testing this would be one making use of the survey data on education level. Less educated individuals are likely to have lower cognitive abilities, on average, and they are also likely to have less sophisticated means of processing relevant information, due to more limited education. Since more educated individuals also tend to have higher incomes, economic interest alone would lead us to expect the more educated to be less likely to favor progressive taxation, yet Table 1, Part 2 shows the opposite, and the correlation between education and favoring progressive taxes is also significantly positive in Table 2. The fact that less educated individuals are less in favor of progressive taxes even though such taxes are more in their interest is thus suggestive of the operation of errors in cognition. The comparison with answers to the business taxation question is also easily interpreted in a fashion supportive of this conjecture. That is, the smaller share of the more than of the less educated who favor higher taxes on large companies, going as it does in the opposite direction of the difference for the progressivity question, seems difficult to explain until we consider that less educated people are less likely than the more educated to understand that taxing businesses can have indirect effects, as mentioned above. A plausible interpretation is that more educated people are wary of imposing extra taxes on large businesses due to these indirect factors, so that the relatively high proportion of the less educated who favor such taxes could again reflect cognitive error.

The cognitive errors idea can also be tested with subjective information about the intelligence of respondents. The survey includes an item asking the interviewer to assess the intelligence of the respondent as being much above average, a little above average, average, a little below average, or much below average. We treat this as a cardinal measure that is decreasing in assessed intelligence, and compute its correlation with the ordered responses to our questions. Only one of the correlations, that for the second bequest question, is significant, and only at the 10% level. All of the correlations, including that one, have signs suggesting that less intelligent individuals want more progressive taxes, want higher taxes on big businesses, or favor bequest taxes. Hence the

interviewer's intelligence assessment data cuts in the opposite direction of the education data, although weakly. The answers must be treated with caution since interviewers' assessments were made at the end of their interviews, and can thus be contaminated by their own biases regarding what constitute good answers.

To investigate and compare the overall impacts of economic self-interest versus social preferences or ideology, we constructed a composite indicator for each sphere, this

| **Table 4. Pair wise correlations with 1st principal components.** | Progressivity | Corporate Tax | Favorable to Bequest Tax | Progressivity in Bequest Tax | Eliminate Estate Tax |
|---|---|---|---|---|---|
| 1st Principal Component (R's individual income; R's Household Income; Subjective Social Class) | 0.0379 | -0.0775* | -0.0853 | 0.0315 | 0.0368 |
| 1st Principal Component (R's Political Self-placement; R's Party self-identification; importance of equality) | -0.2853*** | -0.1759*** | -0.2490*** | -0.3998 | -0.2205* |

* Significant at 10%; ** significant at 5%; *** significant at 1%

being the first principal component of three individual measures in each dimension. For economic interest, we use the first principal component of the respondent's (self-reported) individual income, of the respondent's (self-reported) household income, and of his or her self-reported subjective social class. For ideology, we use the first principal component of the respondent's political self-placement, party self-identification, and response to the question on importance of equality. The three measures comprising each index are highly correlated with each other. Table 4 presents the pair wise correlations between the two first principal components (FPC) and the reordered answers to our five questions (see first note to Table 2). The first striking result is that there is considerably more indication of correlation for the ideological factors than for the economic self-interest factors. The only question for which the self-interest FPC shows a significant correlation, and that at the 10% level only, is for the corporate tax, where the sign is consistent with expectation (those with higher incomes and

socioeconomic status are less likely to favor imposing higher taxes on big business). For most of the remaining items, the correlations with the self-interest FPC are of expected sign, but not significant. In contrast, the ideology FPC is of expected sign for all questions, significant at the 1% level for the first three, and at the 10% level for the last (the second bequest question).

| **Table 5. OLS regressions** | **(1) Progressivity** | **(2) Corporate Tax** | **(3) Favor Bequest Tax (1)** | **(4) Favor Bequest Tax (2)** |
|---|---|---|---|---|
| FPC (Income, Socio-ec. Class) | 0.014 [0.024] | -0.081 [0.034]** | 0.020 [0.022] | 0.066 [.0725] |
| FPC (Political/Party Self-ID, Importance Equality) | -0.121 [0.025]*** | -0.068 [0.035]** | -0.060 [0.021]*** | -0.190 [0.0806]*** |
| Constant | 2.557 [0.033]*** | 2.607 [0.046]*** | 1.106 [0.028]*** | 1.443 [0.102]*** |
| Observations | 245 | 245 | 118 | 127 |
| R-squared | 0.09 | 0.05 | 0.06 | 0.05 |

Standard errors in brackets; * Significant at 10%; ** significant at 5%; *** significant at 1%

Consider now Table 5, in which both FPCs are simultaneously entered in regressions attempting to explain expressed opinions on our questions. (Progressivity of bequest tax is left out because of the much smaller number of responses.) Consistent with Table 4, the ideological FPC obtains a significant coefficient in every regression, usually significant at the 1% level, while the self-interest FPC is significant only in the regression for the corporate tax question. If regressions for the progressivity variable (24_1) are run with only the self-interest FPC or only the ideological FPC, the former explains less than a tenth of one percent of the variance, while the latter explains over 8%, making clear that most of the work is being done by it. Disappointingly, however, even the combined regressions explain less than 10% of the variance in their dependent variables. So even though ideology appears to have more explanatory power than

economic self-interest, these models leave most of the differences in expressed opinions about taxes unexplained.[4]

### *4. Performance of 2004 Panel Survey Questions versus Pilot Study Question on Progressivity*

The last question we begin to take up in this preliminary analysis is: to what extent do the questions about taxation that were included in the Pilot Study provide information that was not already present in the Panel Survey questions "Do the rich pay the right amount of taxes?" and "Do the poor pay the right amount of taxes?"

| **Table 6. Pair wise correlations** | Progressivity | Corporate Tax | Favorable to Bequest Tax | Progressivity in Bequest Tax | Eliminate Estate Tax |
|---|---|---|---|---|---|
| Do rich pay the right amount of taxes?[1] | 0.2359*** | 0.0932** | 0.0720 | 0.5254*** | 0.1198** |
| Do poor pay the right amount of taxes?[2] | -0.1368*** | -0.0134 | -0.0159 | -0.3866* | 0.0228 |
| Combined index[3] (rich-poor right taxes) | 0.2291*** | 0.1110*** | 0.0557 | 0.5734*** | 0.0868 |

* Significant at 10%; ** significant at 5%; *** significant at 1%

[1] Valid answers and related score: "More than should pay" (1), "About right" (3), "Less than should pay" (5).

[2] Valid answers and related score: "More than should pay" (1), "About right" (3), "Less than should pay" (5).

[3] In order to combine the answers to the previous two questions together into a single measure we followed the following procedure. We assigned a score of 5 (more redistribution) to those individuals who answered 5 to the 'rich-right-tax' question, and 1 to the 'poor-right-tax' question; a score of 4 (somewhat more redistribution) to those who answered 5 to the 'rich-right-tax' question and 3 to the 'poor-right-tax', and to those who answered 3 to the 'rich-right-tax' question and 1 to the 'poor-right-tax' question; a score of 3 to those who answered 3 to both questions, to those who answered 1 to both questions, and to those who answered 5 to both questions; a score of 2 (somewhat less redistribution) to those who answered 3 to the 'rich-right-tax' question and 5 to the 'poor-right-tax', and to those who answered 1 to the 'rich-right-tax' question and 3 to the 'poor-right-tax' question; finally a score of 1 (less redistribution) to those who answered 1 to the 'rich-right-tax' question, and 5 to the 'poor-right-tax' question.

[4] Almost identical results are found when the variables used to generate the two FPCs are used directly in regressions, rather than in the combined form of the FPCs. A possible concern is that what respondents say about taxes in a survey may be more consistent with other opinions that they express in a survey than with their actual voting behavior, due to the well-known tendency to attempt to project consistency in one's opinions.

Table 6 shows pair wise correlations between the reordered answers to our five questions and answers to the two Panel Survey questions. Because our basic tax progressivity instrument, 24_1, is the answer to a single question, we also investigate whether the answers to the "rich taxes" and "poor taxes" questions can be combined into a single index that provides essentially the same information. The last row of Table 6 shows the combined index's correlations with the reordered answers from 24_1 and our other questions, with an explanation of that index in its note 3 (the index is explained in table note 3). The first column shows that the responses to our tax progressivity measures are highly correlated with the same respondents' answers to both the "rich taxes" and "poor taxes" questions, and thus also with the combined index formed with the answers given to those two questions. This is reassuring, insofar as it constitutes a validity check on the new question, but it raises the issue of whether our question provides any new information - since if it doesn't, there's no case for including it in future rounds of the survey.

There are several ways we might address this question. First, we may note, from Table 6, that even though the answers to 24_1 are highly correlated with those given to the two survey questions, they are not correlated with all items. In particular, the answers to the first bequest tax question show no correlation whatever with answers to the two survey questions. The patterns of correlation in columns 2 and 4 also differ from that in column 1, indicating different relationships to the survey question information.

Second, we can ask what fraction of the variance in answers to our main progressivity question (24_1) is explained by the same respondents' answers to the two survey questions. An OLS regression with the reordered answers to 24_1 as dependent variable and the two survey question answers plus a constant as explanatory variables obtains an R-squared of 0.057. This means that only 5.7% of the variance in answers to 24_1 can be explained by the answers to the survey questions, *prima facia* evidence that the answers to 24_1 do contain additional information (i.e., 96.3% of the information encapsulated in the answer to the new question is new).

However, it would be desirable to know in a more specific sense what information of value is to be found in the answers to 24_1 that is not found in the answers to the two

survey questions. Although we've begun an investigation into this, we've been unable to complete it at this writing, so the matter remains for further study.

Finally, it can be pointed out that the original questions proposed by us for the Pilot Study were considerably more specific than 24_1. Rather than asking whether the respondent favors progressivity in general, those questions asked whether the respondent finds particular degrees of progressivity to be too little, too much, or about right. (The survey questions about the rich and poor paying enough taxes can be implicitly understood in a similar manner, but doing so means assuming that the respondents know what the effective tax rates are.) Thus, if it were the case that answers to question 24_1 were found to contain no information that cannot already be extracted from the existing survey questions, this does not imply that more specific questions about *degrees* of progressivity would not be worth adding to future surveys.

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